COMMERCE AMERICA
FORMERLY COMMERCE TODAY

U.S. Department of Commerce / March 15, 1976

LOAN$ From World's Development Banks Equal... U.S. EXPORTUNITIES!

Newsmemo

Unique devotion to business and its values is built into the American national character. So concludes historian Thomas C. Cochran of the University of Pennsylvania. Thus famous business leaders—Girard, Vanderbilt, Sloan, Rockefeller—are seen not as unique geniuses, but as exemplary products of a society in which social respect is won through competence in practical affairs. Strong individualism, easy migration and competitiveness, based in part on the American social and physical environment, have made U.S. business forms and practices differ from those of foreign nations, in Professor Cochran's view.

What ways to bring the world of work and institutions of learning closer together? Public hearings in five cities this month and in February had been scheduled to explore this goal set by President Ford. Commerce Secretary Richardson noted in his call for the meetings "The President asked the business and labor communities to become more closely involved with the educational process at all levels, and he asked educational institutions to become more sensitive to and involved with the needs of our citizens and our free enterprise system."

Business continues to be the most popular field of college study. The number of business majors was about 16 percent of all students enrolled in October 1974, according to a new Census Bureau report. Education was second, with 13 percent; other leaders, in percent, were: health or medical, 9; social sciences, 9; engineering, 5; humanities, 5; biological sciences, 4; English or journalism, 3; law, 3; mathematics or statistics, 2; physical sciences, 2; agriculture or forestry, 1.

Earlier warnings will soon be available to Americans on such natural disasters as floods, earthquakes and tidal waves. Commerce Department's National Oceanic and Atmospheric Administration is preparing a system that will mount an alert at remote places where such disasters can originate: isolated river headwaters, areas in the oceans far from shipping lanes, and other inaccessible spots. Sensing devices such as water level indicators, wind gauges and wave height recorders will now be linked in a satellite-and-computer network that can flash danger signals almost instantaneously to sentinel stations.

Watch the tender offers in our Worldwide Business Opportunities columns! A U.S. fiberglass boat builder would undoubtedly support this advice to American firms. The Whittaker Corp.'s Trojan Boat Co. has sold 100 fiberglass snapper fishing boats to the Mexican Government in an order that began with a tender notice sent to Washington by the U.S. Embassy in Mexico City in June 1974. George Delgado of the Commerce Department unit that transmitted the tender to interested boatbuilders (some tenders are published, some sent directly to interested suppliers) was a guest at the recent christening ceremony for the first five completed boats.

Welcome to the first issue of The Center Letter. The Maryland Port Administration is using the new publication to introduce to the business community its World Trade Center, now under construction along the inner harbor in downtown Baltimore. The 30-story building is due for completion in January 1977. According to the World Trade Centers Association, such centers are currently in use in seven U.S. cities, two Japanese cities, and one each in Guam, Belgium, Korea, New Zealand, Spain, Sweden and the United Kingdom. The Center Letter is available from Maryland Port Administration, 19 S. Charles St., Baltimore, Md. 21201.

Give U.S. technology credit for another early-warning accomplishment. E-Systems, Inc., Dallas-based electronics and aircraft systems firm, met a Feb. 22 deadline to put the Sinai Desert system into operation in the Egypt-Israel buffer zone. In about a month on the job, airlifting men and heavy equipment into the rugged mountainous area, E-Systems built four seismic sensor fields, three temporary watch stations and a temporary base-camp. Next deadline: to have permanent facilities in place by July 1.

COMMERCE AMERICA
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CONTENTS

Vol. 1, No. 6, March 15, 1976

5
Loans By World's Development Banks Can Mean Sales For U.S. Exporters
Many American companies, however, are passing up a market backed by $8 billion in annual financing now, with a growth rate of 15 percent each year.

8
Helping Young, High-Technology Firms To Start Up And Grow
Commerce Department advisory unit offers eight suggestions on financial and tax incentives to build a favorable climate for small, innovative companies.

2 **Economic Highlights**
Unemployment has been unusually high in the 1970s but changes in the labor force and increases in income unrelated to employment suggest that the total economic hardship from a given level of unemployment has decreased over the past two decades.

10 **Energy Management Digest**

11 **Domestic Business Report**
Target areas get attention to improve upcoming census coverage—Ocean Survey charts, a shot in arm for U.S. economy—Wage and Price Council studying federal impact on steel—National Football League and a student job search—Pollution control effort seen treading water—Sulfur oxide pollutants likely to persist in Northeast through 1980—Recent NTIS publications—Report helps homeowners conserve heat—Calendar for business.

20 **International Commerce Report**
U.S. trade by area, 1975; a summary report—U.S. makes tropical products duty offers in Multilateral Trade Negotiations; other MTN developments—Reports from U.S. exhibitions abroad—Results of U.S. trade mission to Iran, Israel—Business prospects in Japan, Germany, Pakistan, Yugoslavia, Tanzania, Rwanda—Calendar for World Traders—Licensing, sales, construction opportunities—Visiting buyers.

COVER: The emphasis is on "export-unity" as U.S. agencies make efforts to get more American firms interested in follow-on sales from development bank loans. Story on page 5 has details and pertinent contact points.

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Unemployment: Rate Remains High But Some Hardship Is Alleviated

Economic Highlights is prepared by Maynard Comiez, Acting Chief Economist for the Department of Commerce.

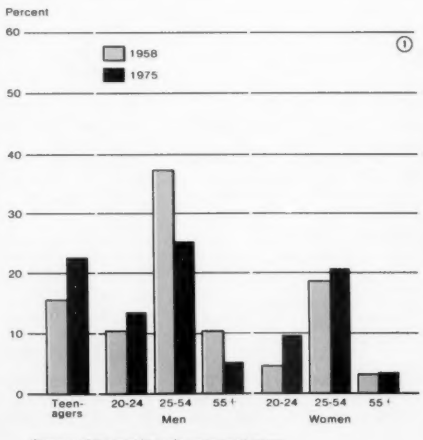
The nation's unemployment rate has remained relatively high, in good times and bad, in the 1970s. The average rate over the past six years is more than a percentage point above the averages for both the 1950s and the 1960s, and the 1975 rate of 8.5 percent was far above the previous peak of 6.8 in 1958. A comparison of these two peak years reveals substantial changes that provide clues to the degree of economic hardship that results from unemployment.

The years 1958 and 1975 have many economic similarities. In both cases, severe recessions reached their low points, with the turnarounds occurring in the spring. Both recessions were marked by heavy layoffs that resulted from an overabundance of inventories, especially in durable goods such as automobiles. In fact, the auto industry was a particularly threadbare spot in the nation's economic fabric in both recessions.

In 1975, a much higher proportion of the labor force was composed of women compared with 1958—the result of a long-term trend that shows no sign of slackening. The proportion of teenagers in the labor force also is much higher, mainly because of the high birth rates that prevailed from the late 1940s to the mid-1950s. Another change may have a more direct bearing on the degree and kind of hardships suffered by the unemployed: the types of income that are not affected by employment have greatly increased.

The marked change in the composition of unemployment between 1958 and 1975 is shown in Chart 1 below. The proportion of men 25 and over among the unemployed has fallen from nearly half of the total to less than one-third; the shares of teenagers and young women have risen sharply. At one time, the rate of unemployment among mature men was considered an indicator of the incidence of economic hardship caused by joblessness since most males 25 and over were the only "breadwinners" for their families. With changing lifestyles, fewer women are dependent on others and a growing number have achieved equal or superior status as earners in the household. Nevertheless, more men than women are primary earners.

Composition of Unemployment, 1958 and 1975[1]



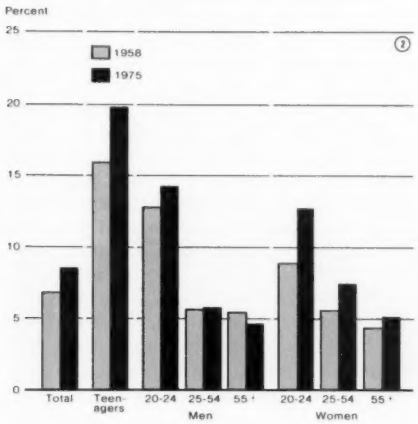
[1]Percent of the total in each component group

Complete data are lacking, but the increased proportion of teenagers and the reduced percentage of men of prime working age suggest that the unemployed now include a smaller proportion of primary breadwinners. Significantly, in 1975 about 40 percent of the unemployed teenagers and 16 percent of the women age 20-24 were seeking only part-time jobs. These proportions are much higher than the percentage of adult males seeking part-time work.

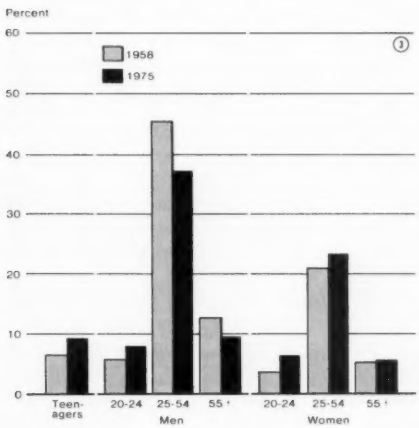
The increase in the percentage of total unemployment accounted for by young people and women naturally reflects in part the increase in their proportion of the labor force. In addition, however, it reflects a greater rise in their unemployment rates compared with the rates for other groups. This comparison is shown in Chart 2. This pattern of change supports the widely accepted belief that a severe increase in unemployment falls disproportionately on the marginal workers—those with the least experience and attachment to jobs.

The change in the pattern of labor force composition is shown in Chart 3. In the civilian labor force, as in unemployment, the proportion accounted for by young people, especially young women, has risen markedly, with some increase

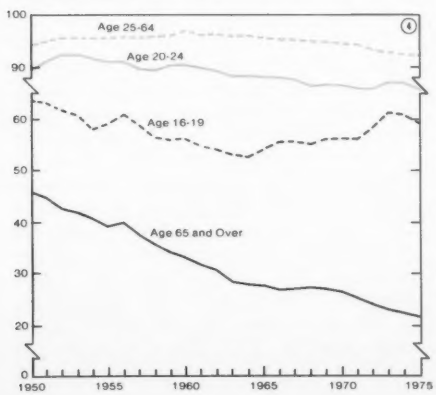
Unemployment Rates, by Age and Sex, 1958 and 1975



Composition of the Civilian Labor Force, 1958 and 1975[1]



Labor Force Participation Rates, Men



also in the percentage of older women. The offsetting declines have occurred among men of 25 years and over. It appears, therefore, that a part of the rise in the unemployment rates for young people and older women has been due to a sharply increased supply of workers without a corresponding gain in available jobs.

The shift in labor force shares shown in these data is part of a long-term pattern that reflects both changes in the age composition of the population and shifts in the degree of labor force participation by the various age-sex groups. The present size of the labor force aged 30 to 45 reflects the very low birth rates of the depression and the war years, while the sharp increase in the younger labor force groups—16 to 24—is partly due to the extremely high birth rates that persisted for more than a decade after the war. The number of births reached an all-time peak in 1957, after which a slow decline set in.

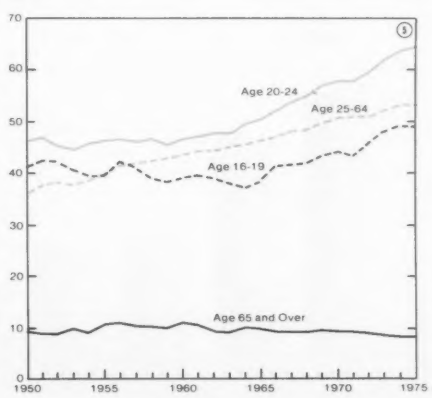
The shifting pattern of participation in the labor force is seen in Charts 4 & 5. The trends reflect a complex variety of social and economic factors operating over a long period. The long-run increase in the participation of women reflects many developments that are mutually reinforcing: rising affluence, the increased mechanization of household tasks, the declining size of households, and recently the sharp drop in the number of young children, all of which have lessened the amount of work in the home. Steadily rising living standards—the pressure on young people to own a car, for instance—have also increased the incentive to find jobs. These developments have been accompanied by changes in social attitudes; not only has the stigma attached to the taking of jobs by women (especially middle-class married women) virtually disappeared, but many women now take pride in their careers and economic independence. Changing attitudes have also encouraged higher educational levels for women, and this has increased their employability.

The postwar increase in the labor force participation of women came in two stages: up to about 1962, it occurred very largely among women over 40. After 1962, the growth slowed for these older women, but began to accelerate sharply for young women, probably because the number of preschool children was beginning to decline, thus freeing many young women to take jobs.

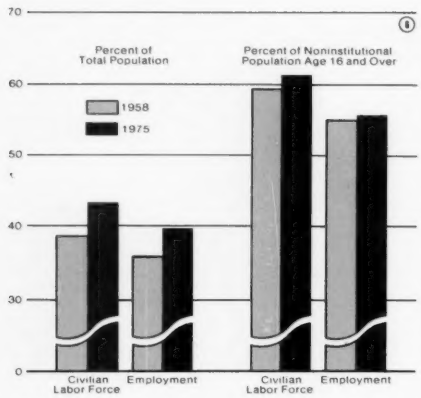
At the same time the world of work has been changing to accommodate more women and teenagers. Over the years, growth in employment has been largely in the service-type jobs that are usually filled by women and teenagers. In addition, the number of part-time jobs scheduled to suit the requirements of suburban housewives and teenagers has greatly increased.

For men, on the other hand, nearly all of the major social and economic changes have acted to lessen the former com-

Labor Force Participation Rates, Women

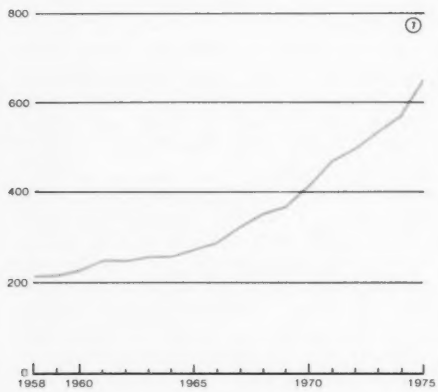


Civilian Labor Force and Employment as a Percent of Population, 1958 and 1975[1]



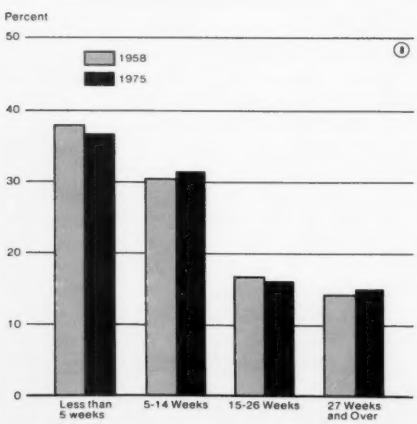
[1]Percent of the total in each component group

Transfer Payments Per Capita in Constant Dollars of 1972 Purchasing Power



[1]Adjusted by the deflator for personal consumption expenditures.

Composition of Unemployment by Duration, 1958 and 1975[1]



[1]Percent of the total in each component group

pelling necessity to work. The effects have been especially marked for men over 65, whose labor force participation rate has fallen from 47 percent in the late 1940s to 22 percent in 1975. This decline has mainly reflected the increased adequacy of social security benefits as retirement income, and the extension of coverage to additional groups, notably farmers. Also important in reducing the average participation of older men has been the sharp decline in the number of self-employed persons on farms, where work in some degree often continues to the grave.

Even among men in the prime working ages—25 to 54—the participation ratio has shown a gradual decline. The major underlying reasons for this trend have been the general rise in affluence, the increased number of working wives, and the decline in the number of young children needing support, which have made it increasingly feasible for men to drop out of the labor force for short periods. Another important factor was the extension of social security pensions to persons disabled before retirement age, which began in 1961.

The increasing labor force participation of adult women was virtually balanced by declining participation of men until about 1965. After that year, however, the total participation rate began a gradual rise. This upward trend mostly reflected an acceleration in the rise of participation rates of young women and a strong upturn in the rates for teenagers. Both increases were probably due in large part to the increased availability of jobs during the prosperous second half of the 1960s and the recovery from the 1970 recession. In addition, the rise in the rate for young women was partly due to the declining birth rate. Between 1965 and 1975, the overall labor force participation rate increased by almost two percentage points to 61.8 percent.

The effects of this increase in labor force participation appear in Chart 6. Even though the unemployment rate is much higher than in 1958, the percent of the population employed is also higher. The increase from 1958 is significant when employment is measured against population of labor force age—16 years and over—but when it is measured against the population of all ages, the rise is even larger because of the sharp decline in the number of young children. This means that the proportion of the population either actually or potentially dependent on the earnings of employed persons is now significantly lower than in 1958.

The nonworking population, of course, may have income from various non-wage sources—dividends, interest, rents, and transfer payments. In 1975, transfer payments accounted for a little more than half of the combined total of these non-wage sources. Chart 7 shows that transfer payments, on a per capita basis and adjusted for price increases, have risen steadily and sharply since 1965. The payments depicted in the chart include all types of income that are not directly related to current employment; they include pensions of workers from both the private and government sectors, as well as Government payments in the form of social security, unemployment benefits, welfare, and veterans benefits. These payments in 1975 were 2½ times the 1965 level. This has enhanced the wellbeing of the nonworking population, and it also has reduced the financial burden on those workers who support children, the elderly, the disabled, and other dependents.

The compilation of unemployment by duration is shown in Chart 8. With the unemployment rate considerably higher than in 1958, it might be expected that the long-term unemployed—27 weeks and over—would account for a higher percentage of the total in 1975, since this is the category with no time limit. The chart shows, however, that the pattern of unemployment by duration was almost exactly the same in both years. The reason for this similarity is that the increase in unemployment has occurred very largely among those age-sex groups with less than average persistence in seeking work. In 1975, teenagers accounted for 22 percent of total unemployment, but for only 9 percent of long-term unemployment. Young women 20-24 accounted for 10 percent of total unemployment, but for only 7 percent of long-term unemployment. Thus the duration figures offer additional evidence that the hardships of unemployment have not increased since 1958 by as much as the unemployment rate.

Unemployment persists as one of the major problems in the U.S. economy, and the rate has been unusually high in the 1970s. Furthermore, one can argue that the psychological and social burdens on an unemployed individual have increased over the years since, as society in general becomes affluent, the plight of the unemployed person is in sharper contrast to that of his more secure working neighbors. Yet, the changes over almost two decades in lifestyles, in the composition of the work force and in non-wage income suggest that the total economic hardship resulting from unemployment has lessened. ☆

Development Loans Equal... U.S. EXPORTUNITIES!

A market for goods and services that is backed by $8 billion-per-year financing now, with projected increases of 15 percent each year through 1980—how can U.S. firms pass it by?

U.S. officials are posing that question about the opportunities that flow from the lending activity of the world's development banks. Along with a large number of other countries, the United States is a major contributor to these institutions—the World Bank Group, the Inter-American Development Bank and the Asian Development Bank.

Loans made by these banks give U.S. suppliers of a wide variety of goods and services money-making opportunities not only for the exports financed directly by the loans but also to establish a repeat market in many developing countries. Some U.S. companies have been responding, but many, many more could.

A spokesman for the federal agencies involved has commented: "We in government are prepared to do more to introduce U.S. companies to this market. We want to know how we can better alert U.S. equipment suppliers, engineering firms, consultants and others to this enormous potential for sales."

The scope of this activity can be seen in the overall totals. Loans of almost $8 billion made to the developing countries in fiscal year 1975 represented a 29 percent increase over fiscal year 1974. Increases of 15 percent are planned through 1980.

In a suppliers'-eye view of the lending process, the germ of a new project or program that may be financed by the development banks is found in the borrowing countries. It is there that the representatives of U.S. firms must look for, and even help to develop, the proposals that are then made to the banks. For those who succeed, it is a safe, sure way of penetrating a new market and establishing a base on which to expand business as the recipient country develops. Services of all kinds are needed for these projects, as well as goods and know-how.

In the past, there has been a heavy emphasis on lending for infrastructure projects in fields such as power, transportation, communication, and large scale industry. While the projected dollar amounts to be committed for such projects continue at high levels and represent a still growing market for the goods and services of U.S. companies, there are fresh fields of opportunity today. The banks are breaking new ground in lending for innovative projects in rural development, education, water supply, population, environmental control and urban rehabilitation.

An almost endless variety of goods and services is needed in these efforts. Consulting services, engineering, chemicals, heavy equipment, electrical and communications equipment, transportation items and vehicles—the traditional supplies for infrastructure projects—are still in great demand. But increasingly products and services from the information industry, management services, training, water treatment, medical equipment, farm implements, office and school supplies, are required. In many of these fields, U.S. suppliers are in the forefront in terms of technology and efficiency.

Of course, competitors in other countries are aware of these new lending trends and directions by the international banks, and they are increasing their efforts to obtain a greater share. However, the procurement procedures used by the develop-

It is a safe, sure way of penetrating a new market.

ment banks help to overcome some of the historic disadvantages U.S. companies have faced in some parts of the world. International competitive bidding on government projects, open to companies of all countries that participate in the banks, insures that all suppliers enjoy fair and equal access to the contracts financed by the banks.

The procurement procedures are well-defined and even-handed. The banks have developed highly competent international staffs, which not only help the developing countries in setting priorities and building institutions, but also offer skilled assistance to potential suppliers. English is the main language used in these banks. Importantly, the banks make prompt payments for goods delivered or services performed.

All suppliers enjoy fair and equal access to the contracts.

The Treasury Department now has a study under way to find new ways government might be helpful in gaining for the United States a larger share of procurement under the loans made by these institutions. A federal official referred to this study in observing: "I strongly urge that U.S. firms, too, make a study of this potential. The total value of procurement under these loans is on the rise. The market is large in area and broad in scope. The procurement process is fair, and payments are prompt. To me, that spells opportunity."

Here are some of the pertinent facts and figures on the size and nature of the lending activity of each of the major development banks:

The World Bank Group

The World Bank Group is comprised of the International Bank for Reconstruction and Development (IBRD), which lends at conventional terms; the International Development Association (IDA), the Bank's so-called "soft loan window," offering loans on concessional terms; and the International Finance Corporation (IFC), which focuses on private sector loans and equity investments. Together the three institutions committed $6,018 million in the past fiscal year for projects in Asia, Africa, Latin America, the Middle East, and Europe—an increase of 35 percent over the previous year and 72 percent in a two-year period.

The banks make prompt payments for goods delivered.

In 1973 the World Bank Group's President, Robert S. McNamara, called attention to the need in the developing nations to attack problems of rural poverty, and he urged an increase in World Bank lending along this line. Response to this new direction is apparent when it is seen that half of all the rural development lending in the Bank's history occurred last year. Over the next five years about $7 billion more is expected to be committed. In addition to agriculture ($1,858 million), IBRD and IDA loans provided funds to development finance corporations and industry ($1,297 million), transportation ($1,002 million), and electric power ($531 million).

Some examples of the Bank's integrated lending programs include:

- A $160 million credit to Mexico for two complex rural development projects benefiting about 1,250,000 people in the country's poorest areas. Both projects will raise family incomes by creating permanent jobs, and will expand food production, particularly in corn, beans and beef. Living conditions will improve through better water and electricity services, primary school classrooms and community centers.
- A rural development loan to Thailand of $21 million. This is aimed at increasing specialized agricultural extension services, rural electrification, village water supplies, access roads, and small-scale irrigation.

Last September President McNamara indicated that there will be further changes in emphasis in the Bank's lending programs. He called on member governments to renew efforts to reduce poverty in the cities. Job creation by introducing modern technologies and improved access to housing, transportation, water facilities, education and health services are needed to cope with rapidly increasing urban populations. To facilitate the Bank's programs and to expand its role, President McNamara has proposed that World Bank Group commitments over the next five-year period (FY 1976-1980), approximate $40 billion, which would be a 58 percent increase over the previous five years.

The Inter-American Development Bank

The Inter-American Development Bank is the largest of the regional development banks and serves the region that has traditionally been largest among the LDC's for U.S. exports. Its volume increased in FY 1975 by 3 percent for a year's total of $1,063 million and a cumulative lending total of $7.1 billion. The Bank channels development funds through two facilities: its Ordinary Capital Resources on conventional terms and the Fund for Special Operations on concessionary terms. In the last fiscal year, power and agriculture received most of the committed funds (27 percent and 24 percent, respectively), although on a cumulative basis agricultural funding exceeded that for power. An additional facility, the Venezuelan Trust Fund, was established last year to make loans on ordinary capital terms and make equity investments to develop natural resources, finance working capital, and finance agriculture and agribusiness.

Asian Development Bank

The Asian Development Bank has cumulatively financed 199 projects amounting to $2.1 billion. In FY 1975 the Bank loaned $570 million to member countries from its Ordinary Capital and Special Funds resources. U.S. businessmen are now eligible to bid on procurement contracts financed from both sources. The largest share of ADB funds, 28.9 percent or $165 million, went to the agricultural sector, including forestry, fisheries and irrigation projects, and was four times the amount allocated to that sector in FY 1974. Overall, however, industry has been the major recipient of ADB loans, followed by electric power and transport and communications. In Korea, for example, a Bank loan will finance land improvement work, and in Malaysia an ADB loan will support infrastructure activities and construction of a palm oil mill.

African Development Fund

The African Development Fund (AFDF), a concessional loan fund associated with the African Development Bank (whose membership is limited to independent African countries), was established in 1973. The Fund was created to channel non-African resources to the African development process on a soft-term loan basis. During FY 1975 the AFDF approved seven loans and one study

totaling $29 million, principally in the areas of agriculture and road construction. Although the U.S. participated in discussions for the Fund's establishment, U.S. membership will not be effective until a contribution to the Fund is approved by Congress, where legislation is now pending. When this occurs, U.S. businesses will be eligible to compete for AFDF project bids.

Procurement Information

Clearly the expanded programs and integrated projects supported by the international development lending institutions offer substantial export opportunities for U.S. businesses. As already mentioned, in nearly all cases trade procurement opportunities generated by the development loans are subject to standard rules of international competitive bidding that are established and supervised by the lending institutions. Bidding invitations are issued by the borrowing government or other borrowing entity, and a potential U.S. supplier must be aware of these opportunities at an early stage, as well as being able to submit competitive bids. Invitations to bid are transmitted to eligible country embassies by the borrower and in turn are disseminated and advertised in various publications.

Advance information on possible future development projects is published in the Banks' monthly summaries which list potential upcoming projects as much as one to two years in advance of loan approvals. Monthly summaries issued by the IBRD, the Asian Development Bank and the Inter-American Development Bank are available for perusal and review in the Export Information Reference Room, Room 1063, U.S. Department of Commerce, Washington, D.C., and at the Commerce Department District Offices listed on the inside cover of this magazine.

In addition, the Banks issue press releases announcing project loan approvals which provide basic information on project descriptions, location, financing, procurement needs, and the name and address of the executing or borrowing agency to be contacted for detailed information and bidding documentation. U.S. businesses can be placed on the Banks' mailing lists for press releases by writing to the Bank's public information offices. For further information, the U.S. Executive Directors of each Bank may also be contacted.

Finally, the Department of Commerce announces loan project opportunities in several publications and offers a variety of services to assist interested U.S. exporters. For details on specific opportunities, U.S. suppliers should consult the "Future Construction Abroad" notices in the Worldwide Business Opportunities section of this magazine, or similar notices in *Commerce Business Daily*. U.S. companies may also be enrolled as subscribers in Commerce's Trade Opportunities Program (TOP) that alerts them to specific requests for goods and services from abroad, via a computerized matching system. Information on this program is available at each Commerce District Office or through Trade Opportunities Program, Room 2323, U.S. Department of Commerce, Washington, D.C. 20230. Another Commerce Department staff that provides project information related to sales of products or services is the Overseas Business Opportunities Division, Room 2323, U.S. Department of Commerce, Washington, D.C. 20230. ☆

PRESENTING U.S. POSITION—Secretary of the Treasury William E. Simon, who is the Governor for the United States in the World Bank Group, addresses the 1975 annual meeting. At left on rostrum is Robert S. McNamara, who is President of the World Bank Group.

For Information

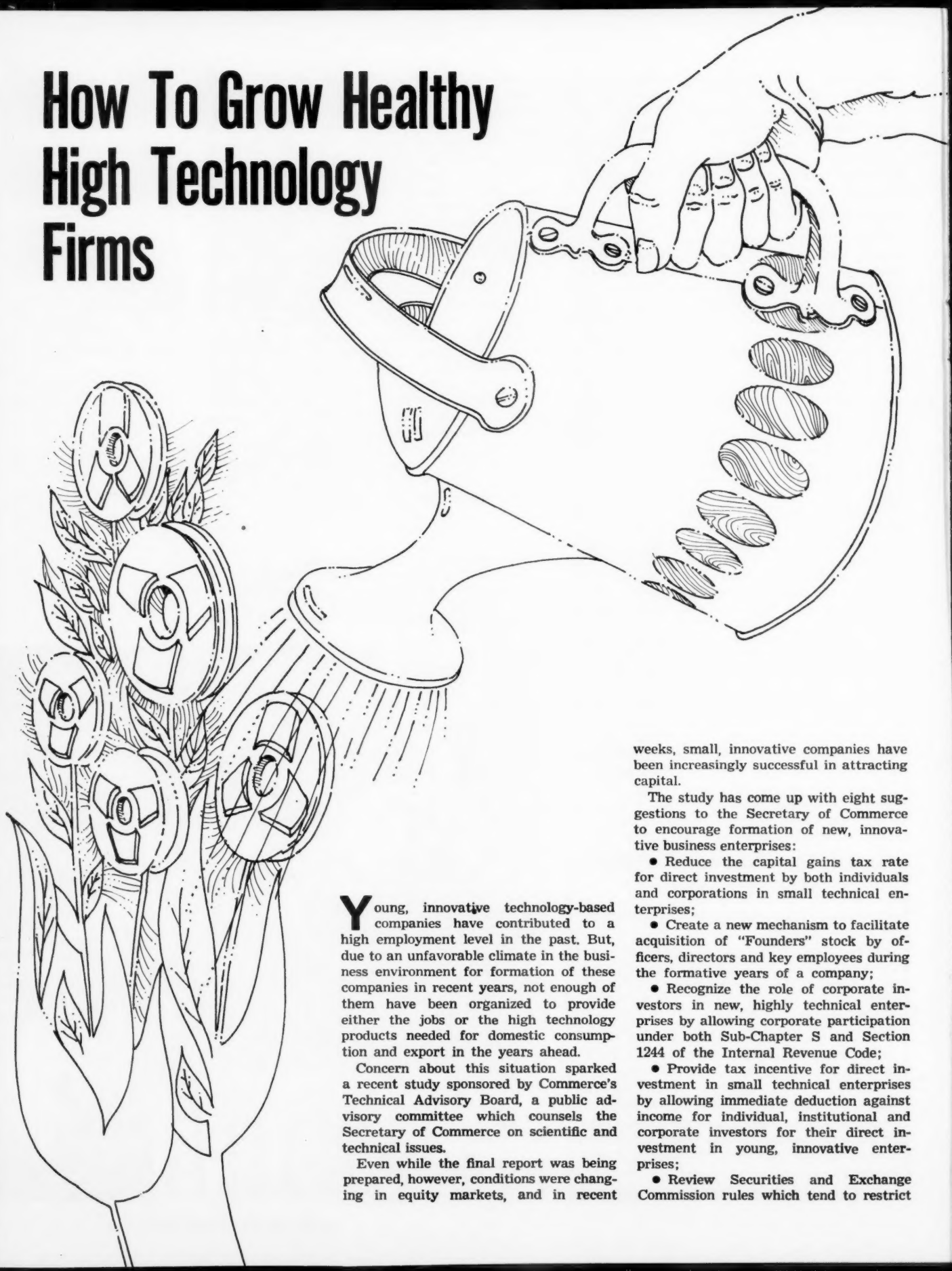
Important contacts at the development lending institutions include:

At the World Bank Group, 1818 H St., NW., Washington, D.C. 20577, the Publications Division, Room A-110, telephone 477-2057, or the Office of the U.S. Executive Director, Room E-1112, telephone 477-2776.

At the Inter-American Development Bank, 808 17th St., NW., Washington, D.C. 20577, the Division of Information, Room 940, telephone 634-8167, or the Office of the U.S. Executive Director, Room 1032, telephone 634-8044.

At the Asian Development Bank, the Office of the U.S. Director, or the Chief Information Officer, both at P.O. Box 789, Manila, Philippines.

How To Grow Healthy High Technology Firms



Young, innovative technology-based companies have contributed to a high employment level in the past. But, due to an unfavorable climate in the business environment for formation of these companies in recent years, not enough of them have been organized to provide either the jobs or the high technology products needed for domestic consumption and export in the years ahead.

Concern about this situation sparked a recent study sponsored by Commerce's Technical Advisory Board, a public advisory committee which counsels the Secretary of Commerce on scientific and technical issues.

Even while the final report was being prepared, however, conditions were changing in equity markets, and in recent weeks, small, innovative companies have been increasingly successful in attracting capital.

The study has come up with eight suggestions to the Secretary of Commerce to encourage formation of new, innovative business enterprises:

- Reduce the capital gains tax rate for direct investment by both individuals and corporations in small technical enterprises;
- Create a new mechanism to facilitate acquisition of "Founders" stock by officers, directors and key employees during the formative years of a company;
- Recognize the role of corporate investors in new, highly technical enterprises by allowing corporate participation under both Sub-Chapter S and Section 1244 of the Internal Revenue Code;
- Provide tax incentive for direct investment in small technical enterprises by allowing immediate deduction against income for individual, institutional and corporate investors for their direct investment in young, innovative enterprises;
- Review Securities and Exchange Commission rules which tend to restrict

the liquidity of small-company-investors;

- Review and simplify reporting requirements for small companies under state and federal regulations;
- Review tax and SEC regulations which are based on unrealistically low dollar limitations outdated by inflation and general cost increases; extend tax-loss carry-forward period from five to ten years;
- Develop new forms of financial and tax incentives for management and key employees of new technical enterprises.

The study says adverse changes in the business climate during the late 1960s and the early 1970s caused a reduction in the "start-up" rate for new companies and restricted the development of small companies established during that period.

Specific causes

Specifically, it finds the business environment for young, innovative companies deteriorated because of:

▸ A decline in government research and development funds measured in constant dollars. About five years ago, a growing disenchantment with science and technology began to develop in the United States as a result of the ever increasing government spending for R&D without, many people believed, benefits that justified the expense. Not only were government R&D contracts no longer a mechanism for small companies to get started, but government-sponsored university research became so oriented that the fruits of such work did not as readily lead to the establishment of new companies. Also, unsolicited proposals were no longer accepted in the numbers in which they once were, and a reliance on competitive bidding rather than sole source proposals had tended to favor the large corporations, which have the resources and ability to submit many proposals, each tailored to different requirements.

▸ Increasing complexity and cost of government regulation. Small companies have often discovered that the monitoring and reporting requirements have become overwhelmingly burdensome.

▸ Reduction of financial incentives for the entrepreneur and the investor. The rules governing the granting of qualified stock options and their taxation have been tightened. Due to tax reform on both federal and state level, the gap between income tax and capital gains tax rates has been narrowed, and the entrepreneur may find that the potential gain from starting his own company may not be as favorable as formerly when compared to employment by a large company at a high salary.

▸ Reduction in liquidity of investments in small companies caused by the absence of a receptive public market and by regulation. In recent years, many professional investors have been discouraged from providing seed capital to new companies because liquidating their investment in a reasonable time period may be too difficult. Three factors have contributed to the reduction in liquidity: the cost of "going public" has for many companies become prohibitive; the public, as a result of bad experiences, is unwilling to invest in speculative securities; and the SEC regulations significantly restrict the large stockholder from disposing of his securities in a reasonably short period of time.

▸ Shortage of capital for organizing new high-technology ventures. Not only has the supply of risk capital contracted, but there appears to have been a shift away from investment in technical companies.

Technology plays a crucial role in the maintenance of a sound domestic economy; its application is essential for the enhancement of productivity, creation of new jobs, and the United States' ability to compete in the world marketplace.

Many foreign countries recognize the importance of maintaining a healthy climate for technical innovation and have taken positive steps, particularly in the support of new product development, to encourage the innovative process.

Future reliance

In the future, the report says, the United States must rely more heavily on the manufacture of high technology products in order to maintain a high level of employment and a growth in sales of U.S. products abroad. Data developed in the study indicate that innovative high technology companies experience more rapid sales growth and job creation than more mature organizations.

In the larger, mature corporation, innovation is viewed mainly in terms of cost reduction. On the other hand, the small, new, technically-based enterprise regards innovation as a way of life which is responsible for the creation of new products, processes and job opportunities.

The report cites data from *Moody's Investment Manual* that gives sales and job growth for the years 1945-1974 for selected innovative and mature companies. For innovative companies, the weighted average annual growth rate for sales was 16.5 percent and for jobs, 10.8 percent. For mature companies, weighted average annual sales growth was 7.8 percent and job growth, 1.9 percent.

Spectacular growth

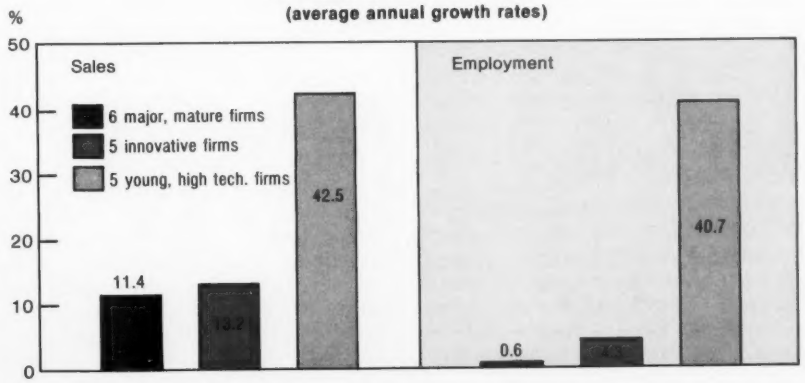
Over the five year period 1969 through 1974 the growth is even more spectacular. For this period, Moody's statistics are broken down under innovative and young, high technology companies as well as mature. Young, high technology companies experienced a weighted average annual growth rate of 42.5 percent in sales and 40.7 percent in jobs. The comparable rates for innovative companies were 13.2 percent in sales and 4.3 percent in jobs, and for mature companies, 11.4 percent in sales and 0.6 percent in jobs.

During this five-year period, the six mature companies with combined sales of $36 billion in 1974 experienced a net gain of only 25,000 jobs, while the five young, high-technology companies with combined sales of $857 million had a net increase in employment of almost 35,000 jobs. The five innovative companies with combined sales of $21 billion during the same period created 106,000 new jobs.

Richard S. Morse, president of MIT Development Foundation and senior lecturer at MIT's Sloan School of Management, authored the report in collaboration with John T. Flander, treasurer of MIT Development Foundation.

The report is available under the title *The Role of New Technical Enterprises in the U.S. Economy*, from William Holt, CTAB Executive Director, Room 3877, U.S. Department of Commerce, Washington, D.C. 20230 (202-967-2394). ☆

The Growth Record: 1969–74
(average annual growth rates)



Energy Management Digest

GETTING THEIR MONEY BACK . . . More than $139 million was recovered as the result of Federal Energy Administration compliance actions in more than 4,500 petroleum industry cases where violations were found during 1975. Refunds to customers of $33.6 million and price rollbacks of $11.8 million were included in the total. FEA also took preliminary steps in 1975 to disallow an additional $275 million of recoverable costs claimed by importers of crude oil and petroleum products. A total of 11,986 cases were closed by FEA's Office of Regulatory Programs during 1975, and violations were found in 4,506.

AIR SHIPMENTS OKAYED . . . The Nuclear Regulatory Commission will continue to allow air shipment of special nuclear materials, other than most forms of plutonium, during the course of a public rulemaking proceeding on air shipments of these materials. The rulemaking proceeding will deal with the health and safety aspects—including packaging—and measures taken to protect air shipments of these materials from theft or diversion while being shipped through highly-populated areas.

HIGH QUALITY PLUS SAVINGS . . . Union Carbide reports that its recently-developed technique of inert gas refining of aluminum produces consistently high-quality metal and significant energy savings. The firm reports that the system has been operating successfully for well over a year in its first commercial installation at Anaconda's aluminum plant in Columbia Falls, Montana. By eliminating two hours previously required for chlorine fluxing and settling, the process cuts natural gas consumption by about eight million cubic feet per month, on an average monthly production of 21 million pounds of cast aluminum.

VAN PLAN . . . The 3M Company has won a special award from the Federal Energy Administration for its energy conservation program, especially its Commute-A-Van Project which company officials say has saved its employees more than 250,000 gallons of gasoline per year. The Commute-A-Van Project, popularly known as vanpooling, began as an experiment in April 1973, with six 12-passenger vans. Today, 75 vans carry more than 800 employees to and from work daily at the 3M Center in St. Paul. More than 3,000 employees, or 33 percent of those at the Center, participate in van-pooling, carpooling, or subscription buses. 3M has shared its energy conservation ideas with more than 4,000 public and private organizations. As a result, more than 40 similar vanpooling programs are known to be in operation throughout the U.S.

INTO THE MARKETPLACE . . . A newly-established office in the Energy Research and Development Administration will speed the movement of recently developed energy technologies into the marketplace. The Office of Commercialization will identify major barriers to making the new techniques promptly available, and will analyze the effectiveness of various incentives to speed up the process, including potential federal assistance programs. It will cover the full range of energy sources: fossil and nuclear fuels, energy conservation, and new technologies such as geothermal and solar energy systems.

SOLAR ELECTRIC PANEL . . . Solarex Corp. of Rockville, Md., has announced the commercial availability of what it says are the first land-based solar electric panels to deliver six watts per square foot output. The panels, which convert sunlight directly into electricity, can be used to supply power for remote communications, control and telemetering equipment, navigation aids, and emergency lighting. The firm reports that solar electric systems have proven quite reliable and are now cost-competitive with conventional energy sources.

DEMONSTRATION PROJECTS . . . The Department of Housing and Urban Development has awarded the cities of Pueblo and St. Petersburg grants for construction of demonstration projects that will heat water for domestic use with solar energy. Pueblo will construct a central solar collector and pipe heated water to individual homes from a central storage tank. St. Petersburg's plans call for construction of separate heating and collection units for four apartments. Pueblo and St. Petersburg are members of the Urban Technology System, and the projects were developed by the UTS, which is funded by the National Science Foundation, and operated by Public Technology, Inc.

Target Areas Get Attention To Improve Coverage Of Upcoming Censuses

Uncle Sam is getting ready to start counting noses again: the next decennial U.S. Census is only four years away. To prepare for it, Commerce's Bureau of the Census is taking a census of Travis County, Texas, in April as a dry run. Travis County includes the capital city of Austin.

The test census will develop improved methods of conducting the 1980 census and making certain that all households are covered. Two areas have been selected for particular attention: minorities and income. A special effort will be made to improve the count of all minorities. The Census Bureau is gradually building a staff of Community Services Representatives experienced in working with minorities.

Travis County has ample minority populations for training Community Services Representatives. In the 1970 Census, 11 percent of the county's population was Black and 12 percent was of Spanish origin.

Improvements are also afoot in the Economic Censuses. There are several areas in which the Census Bureau plans to expand its coverage. More information will be actively sought on nonprofit organizations. Much of the Census Bureau's success in obtaining accurate information on business is dependent on the continued availability and adequacy of the material compiled by the Internal Revenue Service. Since nonprofit organizations are not required to file income tax returns—just an informational return indicating their sources of funding and how it is spent—Census has had to look for other ways of obtaining information. One way is through use of Social Security files. Nonprofit organizations employ workers just like everyone else, and must make deductions for Social Security.

According to Assistant Director for Economic Censuses Melvin A. Hendry, Jr., another economic area in which the Census Bureau is trying to improve its coverage is in retailing.

"Previously only the major centers were covered," Hendry said. "With the proliferation of shopping centers, it has become apparent that many stores were being missed. Therefore, the possibility of providing data in 26 large cities is being investigated. Local committees will define the subsidiaries they wish to have covered in their areas. The only requirements are that a given area must have a minimum number of stores and that each area must be contained in a single Census tract.

"In addition to retail stores, coverage will be expanded to include wholesale, service and manufacturing industries. In order to preserve the confidentiality of the information given, the Census Bureau requires that if there are too few of each type of store in a tract for which information is sought, tracts must be combined until there are enough stores so that it is impossible to tell from which specific one the information came."

In the case of shopping centers, the Census Bureau can rely on the shopping center manager for information. But with the unplanned retail areas, such as a single block of stores, an enumerator must be used, at greater expense.

Presently, a study of record keeping feasibility is being conducted to determine whether it would be possible to include additional questions. Suggestions for additional questions have come from the Interagency Advisory Committee on the 1977 Economic Census, the Data Improvement Committee and the various divisions of the Census Bureau. It is possible that some new questions will be substituted for some that elicit information no longer needed.

The Community Services Representatives program was established for the 1970 Census—20 of them worked out of the 12 regional offices, establishing rapport with members of the major U.S. minority groups: Blacks, Spanish-origin, Asian-Americans and Native Americans (Indians).

"The Community Services Representatives were needed," according to Alfred Hawkins, coordinator of Census' Community Services Program, "to dispel fears that many minority members had concerning the usages of data furnished to the Bureau of the Census. Many feared this data would be used to force people to move who were living in violation of housing codes, to prosecute those who had not paid correct income taxes, to locate those who were being hunted by law enforcement officials, to assist welfare officials checking on eligibility, and similar uses. The Community Services Representatives worked at assuring these people that Census data is held in the strictest confidence and not furnished to other government agencies, such as law enforcement or health and welfare.

"The CSR's also had to convince the minority members that it would be to their advantage to give accurate information, as the allocations of funds for many government programs are based on Census data. For examples, revenue sharing and planning for the number of schools needed in the future."

1970 undercounts reported

Despite these efforts, in 1973 the Census Bureau reported undercounts that had occurred in its 1970 decennial census. The undercount of blacks was estimated at 1.88 million persons, or 7.7 percent. The comparable figures for white persons were 3.45 million persons or 1.9 percent. The method for determining undercounts involved developing the estimated U.S. population independent of the Census, then comparing Census counts to the expected numbers. For estimated population figures, data is developed from available figures on births, deaths, Medicare enrollment, immigration-emigration, and other sources.

At that time the Census Bureau admitted "with presently known statistical techniques, it is not possible to prepare reliable coverage estimates for the population of Spanish ancestry or of other minority groups. The statistics of births, deaths, and net immigration needed to produce the estimates do not exist with the accuracy required for this analysis. Such statistics cannot be compiled from present records."

In preparation for the test census in Travis County, the Census Bureau has hired two CSR's. To get ready for the decennial census, there will be at least one at each regional office—12 in all—by this summer. By 1979, Census expects to have between 175 and 200 CSR's at

work nationally, in both urban and rural areas.

Among the activities of the CSR's in Travis County are assisting in the hiring of the more than 450 employees for the census taking; working with local media on publicity; speaking before church and community organizations explaining the need for participating in the census; and determining the locations and schedules of the mobile vans that the Census Bureau has leased. The vans will serve two purposes: first, they will aid in the recruitment of workers to conduct the census, with special emphasis on attracting minorities; second, Census employees will be available at shopping centers and other convenient locations to aid those individuals who may have difficulty in filling out the census questionnaires, due to such reasons as limited knowledge of the language or inability to read and write.

Income questions asked

A series of questions on income, which were formerly asked only in every fifth household receiving long forms, will be asked of all Travis County residents in preparation for inclusion in the 1980 census.

The data obtained from these inquiries can be used for government programs, such as revenue sharing, and for political reapportionment.

A questionnaire will be mailed out prior to April 20 to each householder, who is requested to return the completed form to the local Census office. The mail returns are reviewed by Census personnel and incomplete returns are followed up by telephone or personal visit. This mail method was used in most metropolitan areas of the United States in the 1970 census.

Travis County's 1970 population was 295,516. A 1973 estimate made by the Census Bureau in cooperation with the State of Texas put the population at 341,772.

Travis County was selected for several reasons. First, its population size puts it within the range desired for the test. Also, it has substantial populations of minority persons. In addition, certain geographic materials needed for the census were available for Travis County, such as computer-coded address lists and street grids for individual communities.

The questions are to be answered as of April 20. All residents of Travis County on that day will be counted. Included will be members of households temporarily away on vacation or business; college students staying in the county while attending school; military personnel stationed at Bergstrom Air Force Base who live in the county; inmates of institutions in the county; and babies born prior to 12:01 a.m., April 20.

Visitors to the county, travelers in hotels and motels, and college students living outside the county while attending school will not be counted.

Four out of five Travis County households will receive short form questionnaires containing about 20 items of inquiry. Every fifth household will receive a long form questionnaire. In addition to the questionnaire, residents are furnished an instruction sheet and a postpaid return envelope. Instructions are given in Spanish telling those households needing a Spanish-language questionnaire how to obtain one.

Beginning ten days after Census Day, census workers will start follow-up interviews, either by phone or in person, at households from which incomplete forms were received or from which no questionnaires were returned. When all questionnaires have been accounted for and completed, they will be shipped to a central Census Bureau facility for editing and processing for use in computers. About 450 local people will be hired to work on the census.

Travis County residents are obliged to answer the questionnaires. The Travis test is part of the 1980 census program and the law under which decennial censuses are conducted requires that questions be answered truthfully to the best of one's knowledge. Answering questions in the population census has been required by law in every census since the first in 1790. The mandatory requirement stresses the need for everyone's participation as well as the necessity for accurate statistics with which to conduct private and public businesses and to arrive at sound decisions.

Strict confidence enforced

The law under which the census operates (Title 13, U.S. Code) also guarantees that information about any individual must be held in strict confidence, and can be used only to develop statistical totals. No one other than a sworn Bureau employee can see information about an individual.

Other government agencies are prohibited from seeing personal information, as are local officials, tax collectors, police, and health, welfare and school officials. Census Bureau employees are subject to severe penalties for disclosure of personal information, and none has ever been convicted of violating the law of confidentiality.

Preliminary population and housing unit counts will be compiled for the county, cities, tracts (metropolitan neighborhoods averaging 4,000 population) and blocks. The data will be made available in unpublished form in July, and final figures will be published in the fall.

Several other test censuses are planned. One will be conducted in May in two Ohio counties, for the purpose of exploring new ways of delineating enumeration districts. Up until now, enumeration districts have generally followed either statistical boundaries, such as tracts, or political boundaries, such as school districts or townships. An effort will be made to find out whether coverage could be improved by changing to physical boundaries, such as roads, which would be easier for the enumerator to recognize and should be less subject to error.

In September, a test census will be conducted in Camden, N.J., determined by the Census Bureau to be a hard-to-enumerate area. These are neighborhoods possessing a variety of social characteristics which make residents wary of responding to enumerators. Special techniques have been developed for hard-to-enumerate areas such as providing more Census Bureau staff and fewer temporary personnel, better supervision of enumerators, smaller workloads, and various methods of community education.

Other test censuses include a National Mail Survey later this year—in which proposed questions will be tried out with a small group—and a dress rehearsal in April 1978, location not yet determined.

Over 150 Million Will Be Eligible To Vote In Fall

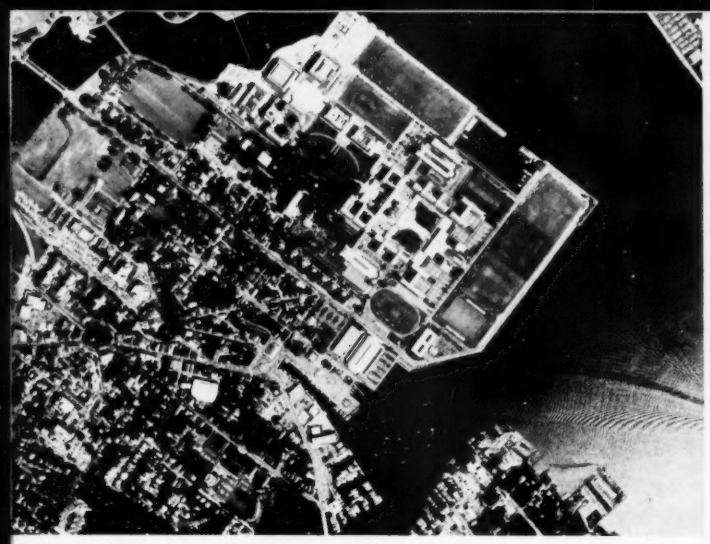
This year 150,041,000 Americans will be eligible to vote in the Presidential election, 9,973,000 more than were eligible to vote in the 1972 election, Commerce's Bureau of the Census reports.

In 1972 the number actually voting was 77,719,000, a little more than 55 percent of those eligible. In that year, the voting age in the Presidential election had been lowered to 18 in all states for the first time.

Census voting age estimates show that Florida and California will have added more than 1 million persons of voting age between the elections. Florida will have added 1,084,000 voters, a gain of 20.7 percent, and California 1,325,000, a gain of 9.5 percent.

Rhode Island and the District of Columbia will show slight declines in the 1976 voting age populations compared with 1972. An estimated drop of 23,000 in Rhode Island will mean a 3.4 percent loss in the State's voting age population. In the District, the decline will be about 16,000, or 3 percent.

The number eligible to vote by regions in 1976, and the percentage increases for each region follow: Northeastern States, 35,178,000, 3.2 percent; North Central States, 39,968,000, 4.7 percent; South, 47,923,000, 10.2 percent; West, 26,972,000, 11 percent.



BICENTENNIAL SETTING—*Placid-seeming Annapolis Harbor (left) has its share of hazards to navigation, as revealed in the chart being held at right by Marvin Emminizer, chief National Ocean Survey pressman, Dr. Robert M. White, chief of the National Oceanic and Atmospheric Administration, R. Adm. Allen L. Powell, National Ocean Survey director, and Commerce Secretary Elliot L. Richardson. The occasion was a ceremony marking the production of NOS's billionth chart.*

Ocean Survey's First Billion Charts Gave Shot-In-Arm To U.S. Economy

A million here, a million recently there . . . it all adds up! And for Commerce's National Ocean Survey it added up to a billion charts produced during the nation's first 200 years.

The first billion milestone was passed earlier this month when a copy of the latest chart of Annapolis Harbor—the sixteenth chart of the harbor to be published by the Survey — came off the presses.

The specially-designed chart contains an inset of the first Annapolis Harbor chart printed 130 years ago, and a description of the technological advances in map-making since the Ocean Survey was created by Thomas Jefferson in 1807.

Better than centerfolds

Speaking at the ceremony marking completion of the billionth chart, Commerce Secretary Elliot Richardson said "A navigational chart—whether nautical or aeronautical—is pretty businesslike in appearance. It is functional, fact-filled and frill-free. But to the men and women who use them, these charts have more glamour than the most spectacular centerfold yet devised. It is literally impossible to enumerate their contributions to our society. But we can begin with the simple statement that they must surely have saved a very great number of lives.

"Before the National Ocean Survey's predecessor was created, the waters in our coasts and harbors were very poorly charted. Shipwrecks were common; insurance rates—and consequently prices—were high. Coastal shipping was the way that articles of commerce were moved, and of course all foreign trade was by sea. I think it a fair statement that, from the Survey's earliest beginnings, no other government agency has earned its way more honestly or well.

"There is hardly a sector of the economy in which our nautical and aeronautical charts have not made a contribution, directly or indirectly: Energy—the environment — food — transportation — housing—the list could go on indefinitely. To say nothing of the weekend sailor or pilot to whom the Ocean Survey's charts represent life itself.

"Today, our horizons are shifting. They are beginning to move under the sea, somewhat as they moved into space a few years ago. The race for the oceans is real, and now it is immediate. A 200-mile limit will be a matter of law, in all probability, quite soon. The resources of the sea—in it, on its bed, and beneath it—represent tomorrow's Klondike in the minds of many. In the exciting and difficult years looming before us, we look to the National Ocean Survey for continued faithful and efficient science and service."

Bicentennial event

Despite the special features, the five-color chart, which has been designated as one of the National Oceanic and Atmospheric Association's contributions to the nation's bicentennial celebration, remains primarily a mariner's chart, designed for everyday use by commercial shippers.

But it was actually the onset of aviation, with its enormous demand for charts of everyplace imaginable, that brought the nation's official chartmakers into really high-volume production, according to NOAA Administrator Dr. Robert M. White. "It is certain that we shall reach our second billion in much less time than it took to attain the first," he said.

The Ocean Survey began with fewer than 200 charts a year. By 1900, it was printing 75,000; in 1917, 330,000. Today, the Survey issues approximately 43 million copies a year, in addition to Coast Pilots, tide tables, tidal current tables, and aeronautical chart supplements.

AMA Book Helps Managers Battle The Budget Slasher

Managers who lack financial background can gain new assurance in defending their budgets against unwarranted cuts from a new American Management Association book.

Budgeting Fundamentals For Nonfinancial Executives covers such topics as the purposes and uses of a budget, budget control through responsibility centers, responsibility accounting, types of costs and their behavior, manufacturing cost systems and the contribution concept, preparing and presenting a budget plan, carving monthly targets out of the annual budget, and hitting budget targets and protecting profits.

The book explains budgeting in plain English: how budgets are used for setting priorities; planning, organizing and delegating; aiding decision making and providing performance measures; and formulating and obtaining approval for new programs and initiatives. The book also details the development and utilization of a profit plan, and includes worksheets and practice materials.

The book can be ordered from the AMA Bookstore, 135 West 50th St., New York 10020, for $12.95.

Wage and Price Council To Study Federal Impact On Steel Industry

The Council on Wage and Price Stability has begun a study of the total impact of federal regulations on the steel industry. Citing a growth of federal regulation in the past ten years, especially the last five, the Council will look at the aggregate impact of these regulations. Specifically, it will study regulations in the areas of environment, health and safety, employment, pensions, and others relating to workers and production.

The Council chose the steel industry for its first in-depth study because of steel's importance to the American economy and its effect on so many other industries. Also, it is impacted by most major federal regulatory activities and there already exist preliminary estimates of the costs and benefits of these activities.

The study will consider three main aspects of government regulation: the different impacts a given regulation may have on different industries; the cumulative impact of a number of regulations on a single industry; and the costs incurred by complying with the regulation.

No overall study

Presently, benefit/cost studies are done by individual federal agencies. For example, the Environmental Protection Agency will measure the costs and benefits of a proposed regulation to control water pollution. But no agency examines the total impact on any affected industry.

Council Director Michael H. Moskow noted that growing experience with the myriad of existing federal regulations has begun to reveal instances where regulations overlap one another, sometimes causing redundant compliance and enforcement situations.

According to Moskow, "uniform national regulations have widely varying benefit/cost impacts upon different industries depending upon the production processes, location, skill composition of the labor force and other factors. Since federal regulations often involve additional costs, most of which are ultimately passed on to the consumer . . . policymakers should have some appreciation of the impact of existing regulations before adding new ones."

If the federal policymakers possessed better knowledge as to the total impact of existing regulations, they could make more informed decisions as to the timing and substance of additional regulations. The Council study, plus any others it may decide to undertake, should provide some of this much-needed knowledge.

The study will:

- produce a catalog of existing federal regulations which have or could have a significant impact on the steel industry.
- identify major areas of federal regulatory overlap.
- catalog contemplated federal regulations which can be expected to have a significant impact on the nation's steel industry.
- review and summarize existing estimates of the costs and benefits of compliance with federal regulations to steel producers, employees and consumers as well as the general public.
- review alternative methodologies for determining the economic impact of regulations which apply to the steel industry.

The Council will schedule meetings with interested parties, such as labor, government agencies and public interest groups, to discuss establishing procedures for gathering and analyzing information. The meetings, which will be open to the public, will be announced in the *Federal Register*.

Nuclear Industry Was There When U.S. Needed It, Congressman Says

"One of the greatest strokes of good fortune this nation has experienced is to have our nuclear industry as well advanced as we find it today," U.S. Representative Mike McCormack of the State of Washington, a former research scientist, said at an early March radiation symposium for business, medical, and government representatives.

Rep. McCormack said the nuclear industry is ready now to provide much of the energy this nation will need during the next 50 years as it exhausts its supplies of fossil fuels.

He spoke at a meeting on Safe Use of Radiation sponsored by the National Bureau of Standards' Institute for Basic Standards. The audience included representatives of instrument manufacturers, private laboratories, personnel badge services, power companies, aerospace firms, radio, pharmaceutical and photographic companies.

"Nuclear energy is the cleanest, cheapest, most reliable source of energy available, with the least environmental impact of any significant option. If we did not have a large block of nuclear energy available to us for the coming decades this country would be in critical danger, even if we succeed in tripling coal production by the year 2000," according to McCormack.

"The nuclear breeder program—which will be in place by the 1990s—will be able to convert the uranium we have on hand—mined and purified—into five times all the energy in all the oil possessed by all the OPEC nations combined," he said.

Scare stories

"Numerous scare stories have been circulated about the radiation impact of a nuclear industry on the general public. Here are some figures that cast some light on this subject:

"If we assume 1,000 nuclear power plants on the line in the year 2000, and assuming no advances in emission control technology, the average person in the United States will receive the following radiation: 102 millirem per year from natural background, 73 millirem per year from medical X-rays and therapeutic radiation, but only 0.4 millirem per year from the operation of all 1,000 nuclear plants and all their supporting activities. That's less than half of a millirem, compared to almost 200 from natural and medical sources," the Congressman said.

'Much more potential'

Further down the line, nuclear fusion presents "much more promising potential," he said. "We have experienced very encouraging progress in controlled thermonuclear research, and are now operating on a new plateau—one which we have dreamed of and sought for 20 years. Now, for the first time, we understand the physics and the dynamics of the plasma in which the thermonuclear reaction must take place. Now, for the first time, we are in a position to move forward with a much more aggressive research program; and now we can, with considerable confidence, predict success.

"I believe that we can have our first commercially feasible fusion electric demonstration plant on the line by the mid or late 1990s," McCormack predicted. "This will require massive support, starting now, for materials research and development, and for engineering studies."

Future symposiums sponsored by NBS' different institutes as part of a series marking the 75th anniversary of the Bureau's founding will cover: Fire Standards and Safety, conducted by the Institute for Applied Technology April 5-6; Computers in our Democratic Society, by the Institute for Computer Sciences and Technology July 26-28; and Methods and Standards for Environmental Measurement, by the Institute for Materials Research Sept. 20-24.

Reviving Economy Spurs NFL Job Search For Top Students

As the economy continues to improve, so does the outlook brighten for disadvantaged high school seniors to pick up next year's college tuition through Commerce's Business Management Fellowship Program.

Under this program, which is carried out in cooperation with the National Football League and the National Alliance of Businessmen (NAB), the student works for a firm during college vacation periods, and upon graduation can move into a permanent job if both student and firm are willing.

To be eligible for fellowships, students must be in the upper 10 percent of their high school graduating classes. They must be accepted or have applied at an accredited college or university, have financial need, and intend to major in a field of interest to the hiring firm.

Students recruited in the program's first year are seniors now, and the program itself has also done some maturing of its own in the intervening years. The recession was a big factor.

"We used to total up the job commitments that firms made available, and not pay too much attention to how many of those commitments actually resulted in a student going to work," says former Cincinnati Bengal Dave Lewis, who coordinates the program year-round for the Commerce Department. "Those figures made nice reading, but didn't mean much since we had no way of knowing how many of the jobs were actually filled by students.

"Now we only count placements . . . jobs that are actually filled," Lewis reports. "Last year the recession kept us down to a total of 800 placements. Our 1976 goal is 1,000, and I think the only question is how much we will exceed that figure."

Double coverage

There are 26 players beating the bushes for jobs, and the students to fill them, in 21 major cities. "We've doubled up in five of the cities, because the jobs were getting to be too much for one ball player to handle," Lewis says. "Securing job commitments from the firms; visiting between 15 and 25 high schools in their cities; setting up student interviews with personnel officers; often having to transport kids to the interviews, and ironing out the many problems that inevitably come up is time consuming, especially in cities the size of New York and Los Angeles," Lewis points out.

For the second year, the ballplayers are operating out of the local offices of the National Alliance of Businessmen, a nationwide volunteer organization linking more than 70,000 business firms. It was set up in 1968 to help secure jobs for Vietnam veterans, needy youngsters and ex-offenders. The NAB provides much-needed secretarial service as well as office space to the harried ballplayers.

How is the program working? It has expended a total of $485,000 in its first three years. It is estimated that this figure represents a cost to the taxpayer of 4.5 percent of the total amount paid in salaries by the companies over four years. It has been responsible for placement of more than 2,000 students. More than 600 private companies have become involved with the program—participating companies include Sears, Roebuck & Co., J. C. Penney, Blue Shield, Chase Manhattan Bank, Dow Chemical, Burger King Corp., General Dynamics, General Electric, Gulf Oil, C & P Telephone Company, Safeway Stores, Joseph Schlitz, Atlantic Richfield, Arthur Andersen & Co., Liberty Mutual, and the Kroger Company.

"We're delighted," says Lewis. "It seems to be working out well for both parties. When school begins, the firms have been inviting two out of three students to come back the following year. Companies that don't make their next summer's employment plans that far in advance usually wind up inviting most of the rest back by the next spring.

SUPER RECRUITER TO SUPER BOWL —*Mark Washington, a member of the Dallas Cowboys, was the top recruiter of kids for jobs he had scouted up for them during the 1975 off-season. He capped off that performance by helping his team get into this year's Super Bowl.*

City	*Player*	*Team*
Atlanta	Joe Profit	Chiefs
Baltimore	Lydell Mitchell	Colts
Boston	Ray Hamilton	Patriots
Buffalo	Tony Green	Bills
Chicago	Mike Adamle	Bears
Cincinnati	Neil Craig	Browns
Cleveland	Doug Dieken	Browns
Dallas	Mark Washington	Cowboys
Denver	Bill Thompson	Broncos
Detroit	Jim Thrower	Lions
Houston	Willie Alexander	Oilers
	Zeke Moore	Oilers
Kansas City	Emmitt Thomas	Chiefs
Los Angeles	James Harris	Rams
	Bill Simpson	Rams
Minneapolis	Ed White	Vikings
New Orleans	Bob Pollard	Saints
	Derland Moore	Saints
New York	J. J. Jones	Jets
	Andy Selfridge	Giants
Oakland	Mike Siani	Raiders
	Jon Staggers	Lions
Philadelphia	Bobby Bell	Cardinals
Pittsburgh	Dwight White	Steelers
San Diego	Doug Wilkerson	Chargers
Washington	Mack Alston	Oilers

We feel that practically all of the kids are re-employed, so it's obvious that the companies are well pleased with them."

For the companies, it cuts down recruitment and training costs, gives direct access to top-flight future management potential, helps a firm's relationship with its community, and allows a company to track the academic progress and job performance of students over a four-year period.

The program is open to all who qualify. A high percentage of the students who have already received fellowships have been female. This is due to the high percentage of young women in the upper ten percent of high school graduating classes. Thus, it can also benefit a firm by serving as a vital adjunct to its affirmative-action program.

The program's on-the-job pattern calls for the students to rotate among several assignments to gain experience in a wide variety of jobs, beginning with the simplest and working up to the most exacting. By graduation, they should have acquired a well-rounded background which qualifies them for management or professional positions. However, it could also help prepare them to become entrepreneurs on their own.

To participate, contact the Business Management Fellowship Program, Room 5206, U.S. Dept. of Commerce, Washington, D.C. 20230 (202-967-4250 or 4895), or a local NAB office.

Mechanical Failure Conference Report Issued

The National Bureau of Standards has published the proceedings of the 22nd Mechanical Failures Prevention Group conference held in Anaheim, California, last year.

Detection, Diagnosis, and Prognosis consists of nineteen submitted papers and discussions devoted to: technology techniques, case histories, ongoing programs and coming requirements.

Jointly sponsored by NBS, the Office of Naval Research, the U.S. Army's Frankford Arsenal, the Naval Air Development Center and the Federal Aviation Administration, the meetings focused on mechanical systems as diverse as nuclear reactors and freight car wheels. Subjects studied included signal analysis techniques for vibration diagnostics, bearing performance monitoring, resonance tire inspection, sonics, oil analysis, acoustic instrumentation for failure prediction, gas path analysis techniques, ship propulsion system performance monitoring and helicopter diagnostics.

Copies of the proceedings are for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, (order by SD Catalog No. C13.10:436), price $4.25.

Industry Highlights

Pollution Control Effort In Nation's Lakes, Rivers Seen Treading Water

(Industry Highlights is prepared by the Office of Business Research and Analysis, Bureau of Domestic Commerce.)

What progress is the U.S. really making in controlling water pollution?

The first U.S. water pollution control legislation was the Federal Water Pollution Control Act of 1948.

Subsequent amendments, reorganizations, transfers, financing schemes providing from 0 to 30 to 50 percent federal grants, varying water quality criteria with considerable rhetoric and scare tactics, all finally culminated in PL 92-500, the 1972 amendment to the Water Pollution Control Act, says K. L. Kollar, chief water resource authority for Commerce's Bureau of Domestic Commerce.

As of December 1975, $1.8 billion had been expended for municipal water pollution control facilities put in place since the authorization of $18 billion to be spent under PL 92-500 in a three-year period beginning in 1972. In addition, about $4.8 billion worth of projects are under various stages of construction.

This leaves about $12 billion to be spent, not including some pre-1972 funds.

Who is responsible for this inability to spend billions of dollars of federal funds for municipal pollution control projects?

Everybody, says Kollar! "It's like the firing squad which formed a circle around its intended victim."

The Federal Government blames the municipalities for moving too slowly in drawing up their plans. The consulting engineers who are preparing the plans complain about excessive government reporting requirements, impact statements, review and re-review.

Equipment manufacturers say that increasing construction costs, which went up 20 percent last year, mean that they must pay today's costs to produce items which they submitted bids on a year ago.

The financial condition of the municipalities has deteriorated, and the troubled money market has often resulted in a locality being unable to provide the 25 percent of the financing required on all projects receiving federal assistance, after all the other roadblocks have been removed.

Without going into a full-scale review of PL 92-500, he says it obviously has not turned out to be the cure-all many people expected.

However, most people involved with the implementation of this act have recognized its shortcomings and have proposed amendments to Congress which should correct them. Hopefully, no radical reorganization will be proposed, as this has been one of the greatest deterrents to progress, Kollar emphasizes.

How do we measure progress in cleaning up the nation's water? Construction put in place is the best indicator in Kollar's view. "The annual accelerated grant program is expected to offset increasing construction costs. However, delays have kept obligated funds in the pipeline for too long, and higher construction costs result in the funds not buying the physical construction intended.

To put this all in perspective, Commerce's water resource specialists have developed a table that converts current construction-put-in-place dollars to constant 1958 dollars, which is about when the federal grant program began.

Municipal Wastewater Construction Put-In-Place

(Millions of Dollars)

Date		1958 Dollars
1958	706	706
1959	772	747
1960	836	799
1961	790	745
1962	939	874
1963	1,148	1,104
1964	1,458	1,333
1965	1,306	1,153
1966	1,432	1,223
1967	1,177	974
1968	1,696	1,353
1969	1,491	1,109
1970	1,647	1,133
1971	2,006	1,240
1972	1,878	1,060
1973	2,125	1,124
1974	2,844	1,321

It is obvious that while current dollar expenditures have been increasing, Kollar points out, the actual buying power in terms of physical facilities installed has changed very little since 1964.

This is not to say that there is no progress, he emphasizes. But the program is not progressing at the rate intended to solve pollution problems.

Efforts are being made to accelerate the release of funds. This should enable municipalities to break ground at a faster rate and bring the national pollution control goals closer to realization.

If this is not accomplished rapidly, the annual "needs surveys" of municipal pollution control requirements will continue to increase, Kollar concludes.

Sulfur Oxide Air Pollution Seen Lingering In Northeast Through 1980

Sulfur oxides—which along with particulates are the major source of the region's air pollution from smokestacks—are likely to continue to plague the Northeastern states throughout the rest of the 1970s.

The main conclusions of a recently-released report on sulfur oxide control technology by the Commerce Technical Advisory Board include:

- Even with an immediate and maximum effort, continuous sulfur oxide emission controls cannot be installed and put into operation on all coal-fired electricity generating plants located in the Northeastern sector of the United States by the end of this decade.
- If such an intensive effort is begun at once, substantially all coal-fired electricity generating sources in the Northeast could achieve that goal during the early 1980s.
- When it can meet emission standards, coal beneficiation—a mechanical separation method—is the most cost-effective technique. When beneficiation alone is impractical, a technique combining it with a chemical process known as wet lime/limestone flue gas desulfurization (FGD) is generally most economic.

A special CTAB panel, drawn from industry, government and education, was established in response to the urgent need for the use of coal to meet the nation's energy requirements while maintaining the sulfur oxide emission standards from the Clean Air Act of 1970.

The study focuses on the practical factors affecting the use of sulfur oxide emission control technologies, including availability, costs, lead times for installation, and gross wastes produced. The panel's goal was to determine the most economic means of attaining continuous emission controls on all coal-fired electricity generating plants in the Northeast at the earliest possible date.

Available now

The study concludes that several continuous sulfur oxide emission control technologies are commercially available and could be implemented now by most utility plants. However, the unavoidable lead times required for engineering design, obtaining disposal sites and permits, financing, manufacture and installation of hardware, and normal "debugging" will delay operation.

In the Northeastern United States last year, 280 million tons of coal were consumed by utility plants with a generating capacity of 128,000 megawatts. By 1980, the study predicts, this annual consumption will increase by 100-200 million tons, which will generate an additional 40-80 thousand megawatts. All new and most existing capacity—a total substantially in excess of 100 thousand megawatts—will need continuous emission controls by 1980 if the sulfur oxide limitations of the Clean Air Act are to be met in this decade.

Areas of emphasis

The panel concentrated on the following technologies, which it regarded as most promising for near-term solutions:

Direct burning of low sulfur coals;

Coal beneficiation, which mechanically separates the heavier rock and sulfur-containing mineral pyrite (but not chemically-bound organic sulfur) from coal;

Wet lime/limestone flue gas desulfurization (FGD), a chemical process which permits use of high sulfur coal without exceeding sulfur oxide emission standards but also produces a sludge which requires disposal;

A combination process which uses both coal beneficiation and lime/limestone flue gas desulfurization (FGD).

In assessing the costs of these technologies, the panel concluded that beneficiation is the least expensive technology for sulfur oxide control. It requires the lowest investment by the utility and displaces a substantial portion of ash from the utility site to the mine site as refuse.

Lime/limestone FGD generally requires the highest capital investment by the utility, yields substantial wastes and results in relatively high operating costs.

The panel found that if lime/limestone FGD was used, the combination of that method with beneficiation was generally the most economical and best all-around choice. The combination method frequently reduces the utility's capital and operating costs from those incurred through the use of the FGD method alone. It also decreases sludge and ash.

Switching to low sulfur coal requires only modest capital costs. However, such coals are in relatively short supply and their use may result in high fuel costs; low sulfur Western coals may also increase or even double the quantity of ash produced at the utility site, and further reduce boiler capacity.

The full *Report On Sulfur Oxide Control Technology* is available for $5 from Commerce's National Technical Information Service, Springfield, Va. 22161. Order PB-246 667.

Spending levels

In a related development, Commerce's Bureau of Economic Analysis reported that its latest available data indicate that anti-pollution spending accounted for 1.8 percent of the U.S. gross national product in 1973. Nationwide spending by consumers, business and government to curb all forms of pollution reached $23 billion in that year.

Consumer spending increased 56 percent above 1972 levels, to $2.8 billion; total business spending was up 18 percent, to $13.2 billion; and federal, state, and local government spending was up 8 percent, to $7.0 billion. Federal funding was approximately $2.5 billion, up 49 percent; with $800 million spent directly by federal agencies and $1.7 billion in federal grants to state and local governments.

Of the total spending, 41 percent ($9.6 billion) was to combat water pollution. Expenditures aimed at limiting air pollution were 39 percent of the total ($9.2 billion), while 19 percent ($4.4 billion) went to the effort to curtail solid waste pollution.

About 94 percent of antipollution spending was for goods and services to reduce the emission of pollutants. The remaining 6 percent went for regulation, monitoring, research and development.

Spending to reduce the emission of pollutants was $21.6 billion in 1973. Businesses spent $12.7 billion; $6.6 billion of it on equipment and the like (a 25 percent increase over 1972) and the rest on operating expenses (an 11 percent increase). Federal, state, and local governments spent $6.1 billion, and consumers $2.8 billion; up 6 percent and 56 percent, respectively.

Governments devoted 68 percent of their abatement expenditures to water, mostly for sewers and sewage treatment facilities. Release of impounded funds accounted for an increase in federal grants for sewers and sewage treatment facilities.

Regulation and research

An exclusively governmental activity, regulation and monitoring accounted for $483 million of federal, state, and local governments' expenditures, up 35 percent from 1972. Checking up on water quality claimed 39 percent of the funds, leaving 34 percent for air, 3 percent for solid waste, and 24 percent for regulating and monitoring levels of radiation, pesticides and noise pollution.

Research and development expenditures came to nearly $902 million, up 10 percent. Private research and development expenditures, estimated at $568 million, include the development of equipment and products for pollution abatement.

Government expenditures, which accounted for the remaining $334 million, consisted of programs to develop pollution abatement techniques for emission standards, and monitoring equipment and sampling procedures.

Supplement To Energy-Saving Book Gives Businesses New Pointers

A supplement to Commerce's *Energy Conservation Program Guide for Industry and Commerce (EPIC)* is now available to help large and small businesses achieve maximum energy savings.

Prepared by Commerce's National Bureau of Standards and the Federal Energy Administration, the 89-page EPIC supplement contains additional ideas and suggestions to establish or improve energy conservation programs in industry, commercial firms, hospitals, universities, public utilities and other energy-using organizations.

The supplement and the original EPIC guide, which was published in September 1974, are intended for use together.

The EPIC supplement contains a simplified explanation of how to implement an energy conservation program. It also expands the checklists of Energy Conservation Opportunities (ECO's) found in EPIC. ECO's are one-sentence tips suggesting specific ways to conserve energy in 13 functional and operating areas, such as commercial practices, electric power, process changes and materials handling.

More than 200 ECO's are suggested in the 212-page EPIC handbook. These checklists are referenced and supported by actual case histories illustrating how energy savings have already been achieved in many organizations. Illustrations are based on industrial and commercial experiences. In addition to a brief description of the action taken to achieve energy savings, the case histories include graphs, tables and sample calculations from which a company can estimate its potential for saving energy and reducing costs.

More case studies

The supplement contains two dozen additional case studies. For example, from the supplement a company could learn precisely how one manufacturing plant saved $14,000 a year by installing a waste heat recovery system in two steam boilers.

The supplement also updates other sections of the original EPIC booklet which provide supporting information for a conservation program. Sections are devoted to data and conversion factors pertinent to energy conservation, financial analysis procedures for evaluating projects, sources and organizations to contact for information on energy conservation, possible safety, health, and pollution considerations that may impact on conservation measures, techniques for developing employee participation in an energy conservation program, a brief guide to the existing technology and instruments for measuring energy-related flows, and a bibliography of energy conservation articles.

The supplement also covers the applicable regulations of the Occupational Safety and Health Administration.

Both can be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Individual copies of EPIC and the supplement cost $2.90 and $2.25 respectively, with quantity discounts available.

Please use Superintendent of Documents number C13.11:115 when ordering copies of EPIC. The supplement is S.D. catalog number C13.11:115/1.

Recent NTIS Publications

These recent reports of government-conducted or government-sponsored research of possible interest to U.S. businessmen are available from the National Technical Information Service. Prices listed are for paper copies; second prices, where listed, are for microfiche. All others are available in microfiche for $2.25. Order from NTIS, Springfield, Va. 22161 (703-321-8543).

Interfuel substitution in the consumption of energy in the United States. Part I: Residential and commercial sector (PB-234 536/CZ). MIT. 97pp. $4.75.

A marketing communications and distribution system to provide the Midwest with coastal fish (COM-74-11466/CZ). Kent State U. Inst. for 21st Cent. Business. 73pp. $4.25.

Personnel technology: using an inexpensive computer-based system to teach performance-oriented skills (AD-785 029/CZ). Human Factors Research, Goleta, Cal. 170pp. $6.25.

Transportation pooling (PB-236 157/CZ). Voorhees & Assoc., McLean, Va. 294pp. $8.75.

Trends in world shipping with particular reference to large crude oil carriers (AD-786 010/CZ). Saclant ASW Research Center, La Spezia, Italy, 30pp. $3.75.

Urban goods movement (PB-235 948/CZ). 122pp. $5.25.

A study of industry response to policy measures designed to improve automobile fuel economy (PB-234 625/CZ). Hittman Assoc., Columbia, Md. 178pp. $7.

Study of industrial uses of energy relative to environmental effects (PB-237 215/CZ). Inst. of Gas Technology, Chicago. 324pp. $9.25.

A fusion power plant (MATT-1050/CZ). Princeton U. Plasma Physics Lab. 590pp. $13.60.

A study of the diesel as a light-duty power plant (PB-236 896/CZ). Ricardo & Co., Shoreham-by-the-Sea, England. 333pp. $9.50.

Industrial energy study of the concrete, gypsum and plaster products industries (PB-237 833/CZ). Stanford Research Inst. 360pp. $10.

Impact of building code regulation on the manufactured housing and mobile home industries (PB-236 935/CZ). New York State Assembly Scientific Staff. 142pp. $5.75.

Domestic waterborne shipping market analysis—legal and regulatory constraints on inland waterways (COM-74-11714/CZ). Arthur D. Little Inc. 26pp. $3.75.

Demand-responsive transportation (PB-236 168/CZ). Transportation Research Board, Washington, D.C. 99pp. $4.75.

Nuclear merchant ships (AD/A-001 561/CZ). National Research Council, Washington, D.C. 136pp. $5.75.

Corrosion and corrosion protection (PB-237 408/CZ). Transportation Research Board, Washington, D.C. $4.25.

Product liability: an interaction of law and technology (PB-237 447/CZ). Carnegie-Mellon U. 158pp. $6.25.

Nationwide survey of state health regulations (PB-236 660/CZ). Lewin & Assoc., Washington, D.C. 274pp. $8.50.

Preliminary design and tests of a stair-climbing wheelchair (PB-236 819/CZ). Franklin Inst., Philadelphia. 69pp. $4.25.

Design and construction of a residential solar heating and cooling system (PB-237 042/CZ). Colorado State U. 233pp. $7.50.

Industrial energy study of the motor vehicle industry (PB-236 694/CZ). A. T. Kearney Inc., Chicago. 478pp. $12.

Uniform marriage and divorce legislation: a preliminary analysis (PB-236 781/CZ). Nat'l Conf. of Commissioners on Uniform State Laws. 878pp. $19.25.

Emergency allocations for power failures: a selected bibliography (AD-786 860/CZ). Rand Corp. 30pp. $3.75.

Travel demand, mode choice and system analysis (PB-237 460/CZ). Transportation Research Board, Washington, D.C. 103pp. $5.25.

Short-term forecast of U.S. oceanborne exports (COM-74-11727/CZ). Temple, Barker & Sloane, Wellesley Hills, Mass. 195pp. $7.

Submarine tanker concepts and problems (COM-75-10009/CZ). Merchant Marine Academy. 195pp. $7.

Rome Meeting Yields Further Gains For U.S. In Atlantic Fisheries

Prospects for more effective management of fishery stocks off the New England coast were improved at a recent special meeting of the International Commission for the Northwest Atlantic Fisheries (ICNAF) earlier this year in Rome, Italy.

At the meeting, the ICNAF acted to:

—Reduce the 1976 overall catch quota for the overfished Georges Bank herring stock from 150,000 to 60,000 tons, and to hold the quota at that level or lower until the stock has fully recovered.

—Effectively prohibit large foreign vessels from fishing directly for herring until June 30.

—Increase the U.S. quota for the Georges Bank herring stock to 9,400 tons for the first half of 1976, an increase of 1,000 tons over the entire U.S. quota for 1975. Allocations for the remainder of the year will be considered at the Commission's 1976 annual meeting scheduled for June 8-23 in Havana, Cuba.

—Reduce the overall quota of Gulf of Maine herring from 16,000 tons to 7,000 tons, subject to review and possible adjustment at the 1976 annual meeting.

The members of the 18-nation body also acted to insure stricter compliance with the increasingly complex system of fishery regulations adopted for the northwest and middle Atlantic.

If finally adopted, these recommendations would require nations with large fishing fleets in this region to provide someone in the area to respond to complaints of violations of these regulations and permit ICNAF inspectors to stop fishing which appeared to be contrary to major regulations.

The ICNAF also acted to provide for possible reductions in a nation's quota when that nation had overfished any of its catch quotas.

Handbook Aids Inventory Managers In Cost Control

A recently-published report is designed to help inventory managers employ control devices to cut equipment costs, increase warehouse efficiency, and improve customer service.

Inventory Systems and Controls Handbook gives solutions for common data processing problems that can save the company time in problem analysis and solution. Case histories, graphs, charts and checklists on how to order materials are included. It also shows the manager how to identify customer demand trends.

Order from Prentice-Hall, Englewood Cliffs, N.J. 07632 for $24.95.

IMPORTED TALENT—*Ruth Spencer, from the Caribbean island of Antigua, recently completed a 30-day internship at Commerce as a guest student worker. She was assigned to the Caribbean desk of the Office of International Marketing. Above, Thomas K. Brewer (left), Andean/Caribbean country marketing manager, and Samuel J. Cornelius (right), deputy director of the Office of Minority Business Enterprise, discuss her overseas business report on marketing in Trinidad and Tobago. Ms. Spencer, the first foreign student to participate in such a program, is a senior majoring in economics at Anderson College in Indiana.*

Calendar Of Business Events

Mar. 20-26 — Washington — Joint Conference of National Congress of Planning and American Society of Planning Officials, Sheraton Park and Shoreham Hotels. For information, American Institute of Planners, Washington, D.C. (202-872-0611).

Mar. 24-25—Gaithersburg, Md.—Recommendations for Buying Better Buildings Symposium, National Bureau of Standards Administration Bldg. Sponsors: NBS and 8 other federal agencies. For information, Donald Becker, NBS Energy-Environment Workshop Coordinator (301-921-2128).

Mar. 25—Tampa, Fla.—Measurement of Company Productivity Seminar, Teco Hall, Tampa Electric Co. 111 N. Dale Mabry. For information, Richard Bronwell, U.S. Dept. of Commerce (813-446-4081).

Mar. 25-27—Milwaukee — Bicentennial Engineering, Scientific & Technical Exposition, Milwaukee Exposition, Convention Center & Arena. For information, Peter Kuehn, 1109 N. Mayfair Rd., Wauwatosa, Wisc. 53226.

Mar. 28-30—Chicago—Northern Regional ABA Bank Card Conference, Hyatt Regency O'Hare Hotel. For information, Andy Ernst, American Bankers Assn., 1120 Connecticut Ave., NW., Washington, D.C. 20036 (202-467-5407).

Mar. 29-Apr. 2—Houston—Extrusion of Plastics Seminar, Hyatt Regency. For information, Heidi Kaplan, N.Y. Management Center, 360 Lexington Ave., N.Y. 10017 (212-953-7262).

Mar. 30—Gaithersburg, Md.—FORTRAN Forum 1976, Administration Bldg., National Bureau of Standards. For information, Mrs. F. E. Holberton, Bldg. 225, Rm. A247, NBS, Washington, D.C. 20234 (301-921-3491).

Mar. 30-31—New York—How To Market Financial Services To The Female Executive, Plaza Hotel. For information, National Business Conferences, Inc., 919 Third Ave., New York 10022 (212-826-6883).

Apr. 5-6—Anaheim, Cal.—Software Management—Defense Systems & Other Federal Programs, Royal Inn. For information, Helen Flournoy, American Institute of Aeronautics & Astronautics, 444 W. Ocean Blvd., Suite 1710, Long Beach, Cal. 90802 (213-437-7466).

U.S. Trade By Area, 1975: Exports To Most Regions Advanced, Imports Declined

The dramatic turnaround in the U.S. trade position from a deficit in 1974 to a surplus last year reflected significant shifts in the trade balances with nearly all of our major trading partners. With U.S. import demand severely depressed during the first half of last year by the economic recession here, purchases from most major world areas leveled off or declined. At the same time, exports generally increased to foreign areas, though the rise was much more moderate than in the previous two years because of the economic slump abroad.

(This report on 1975 U.S. trade by area follows upon the general 1975 trade summary on Page 23 of the Feb. 16 issue.)

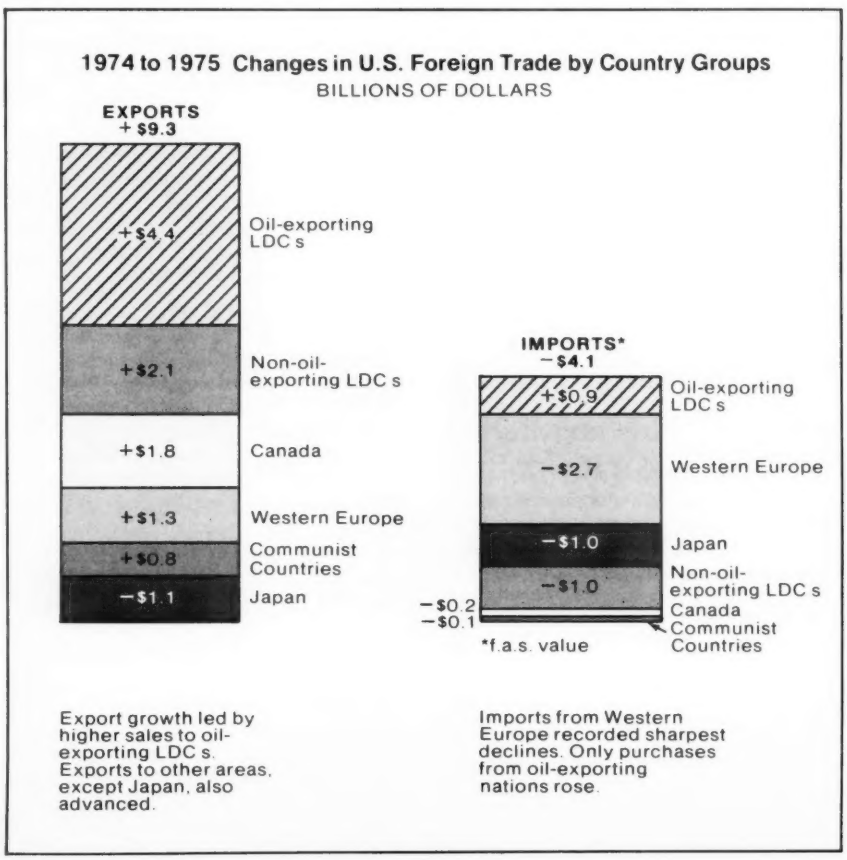
For both exports and imports, changes from the preceding year were moderated by a substantial reduction in the rates of inflation. The rise in exports to most areas, combined with the drop in imports, resulted in sizable increases in the trade surplus, or reductions in the deficit, with the various groups of countries.

A major reason for the continued growth in exports last year, despite the overall sluggishness of foreign economic activity, was another sharp increase in sales to the OPEC and other petroleum-exporting developing countries. Although shipments to these 23 nations as a group accounted for only 12 percent of the U.S. export total in 1975, they provided nearly half of the increase. Imports from these countries, on the other hand, expanded modestly in contrast to the more than 200 percent increase in 1974 when petroleum prices soared. As a result of these developments, the massive trade deficit with the oil-exporting LDCs was reduced by more than $3.5 billion to $8.8 billion. The deficit with these nations fell substantially in both the first and second quarters, but expanded in the third and again in the fourth quarter, mainly because of a pickup in demand for petroleum imports.

The U.S. trade surplus with the non-oil-exporting developing countries increased again in 1975 to $8.9 billion, as our exports expanded while imports declined. After peaking in the first quarter, however, the surplus declined steadily because of a drop-off in exports and a revival in import growth following a slump in January-June.

Reflecting the economic slump in the industrial countries last year, exports to the developed countries as a group advanced only marginally in value. The rise consisted entirely of higher prices which slightly more than offset a decline in the volume of shipments. Sales to these nations dropped sharply in April-June, then turned upward in the third and fourth quarters. The fourth quarter value last year was only marginally below the record level attained in the corresponding period of 1974 despite persistent economic sluggishness in most major markets. The surplus with the developed nations grew substantially in 1975, to $8.8 billion from $3.1 billion in the preceding year. Exports grew at a rate far below average, while imports from these countries declined by 6 percent.

The long-standing deficit with Canada was eliminated as exports increased by 9 percent while imports dropped slightly. A sizable expansion in the surplus with Western Europe occurred primarily as a result of the sharp drop in imports. On the other hand, the deficit with Japan remained unchanged at $1.7 billion as exports and imports fell by roughly the



same amount. The trade surplus with the communist countries grew significantly last year, primarily because of a surge in exports in the fourth quarter which reflected the resumption of large grain deliveries to the USSR.

Trade with oil exporters expands

U.S. exports to the OPEC and other petroleum-exporting LDCs climbed by 54 percent to a total of $12.6 billion. That advance followed an increase of 80 percent in the previous year. After 10 consecutive quarters of rapid expansion, exports declined slightly in the final quarter of 1975. U.S. sales continued to benefit from the large, though somewhat reduced, foreign exchange earnings of these nations and strong demand generated by their burgeoning social and industrial development programs. Machinery and transport equipment exports accounted for the bulk of the growth last year. Shipments to Iran, which rose by 87 percent to $3.2 billion, were the largest to any of the major oil producers. Deliveries of trucks, aircraft, steel pipe, and various kinds of construction and mining equipment were more than double their 1974 values.

Imports from the petroleum-exporting countries, in contrast to those from other nations, advanced somewhat last year. The 5 percent increase to $21.4 billion stemmed almost entirely from greater arrivals of crude petroleum at slightly higher average prices. Arrivals of refined petroleum products, particularly from Venezuela and the Carribbean, declined considerably.

Exports to the other developing countries, in contrast, rose by only 9 percent to $26.7 billion. Moreover, sales declined slightly in the second half, reflecting growing limitations on these nations' ability to buy because of lower export earnings, high fuel import costs, and a heavy external debt burden. Among major LDC markets for U.S. goods, exceptionally large growth in shipments was recorded to India, Peru, and Israel. Machinery and transport equipment shipments to Peru were significantly larger, while increased exports of military goods as well as other commodities accounted for the 29 percent rise in deliveries to Israel.

Imports from the non-oil-exporting LDCs declined by 6 percent to $17.8 billion. This drop in value resulted from weaker U.S. demand for crude materials, semimanufactures, and food which constitute a major part of our purchases from these countries. Lower prices for some key commodities also influenced the reduced import total. Huge declines were registered in imports of sugar from Brazil, the Philippines, Mexico, and Peru. These were balanced off to a small extent by a sizable rise in purchases from the Dominican Republic and Taiwan. Receipts of copper from Peru and Chile plummeted, as did steel purchases from Korea. Receipts of some consumer goods also dropped, especially radios from Hong Kong and both radios and TVs from Taiwan. In contrast, there were increases in imports of clothing from several developing Asian countries and some growth in the value of footwear imports.

U.S. Exports To Major Areas By Principal Commodities, 1975

Billions of dollars

Commodity	Total	Canada	European Community	Japan	Oil exporting LDCs	Other countries
Exports, including military grant-aid, total	107.7	21.8	22.9	9.6	12.6	40.4
Nonagricultural products, total	81.1	19.5	16.1	6.2	10.0	27.6
Nonelectrical machinery	21.6	4.8	4.4	0.8	3.1	8.4
Road motor vehicles and parts	9.3	5.7	0.3	0.1	1.3	1.7
Chemicals	8.7	1.2	2.2	0.6	0.8	3.9
Electrical machinery	7.6	1.3	1.7	0.4	0.8	3.3
Aircraft and parts	6.2	0.4	1.2	0.4	0.7	2.2
Coal	3.3	0.7	0.7	1.4	—	0.5
Iron and steel	2.4	0.6	0.2	—	0.9	0.8
Textiles and clothing	2.0	0.5	0.5	0.6	0.2	0.2
Other nonagricultural products	20.0	4.3	4.9	1.9	2.2	6.6
Agricultural products, total	21.9	1.3	5.6	3.1	1.4	10.0
Grains	11.6	0.1	2.2	1.5	1.3	6.0
Soybeans	2.9	—	1.3	0.6	—	0.7
Other agricultural products	7.4	1.2	2.1	1.0	0.1	3.3
Military shipments and other exports	4.7	1.0	1.2	0.3	1.1	2.8

— Less than $500 million.

Export growth to Canada continues

Exports to Canada increased 9 percent last year, as greater deliveries of machinery, automotive equipment, and coal more than offset reduced sales of steel, trucks, and aircraft. Coal shipments nearly doubled in value, as prices soared. Passenger car exports rose by 7 percent in quantity, but higher prices caused a much greater value increase. Shipments of automotive parts and engines, largely for incorporation into cars for the U.S. market, were higher with the pickup in demand here. Sales of agricultural and most other types of nonelectrical machinery also advanced strongly.

There was little change in the value of imports from Canada last year. The decline in U.S. production through midyear and continued weakness in the construction industry resulted in reduced domestic demand for certain industrial supplies. Imports of lumber, copper, and woodpulp were substantially lower than in 1974. Moreover, purchases of petroleum and products fell by $448 million as a result of export limitations imposed by that country to conserve domestic supplies. Imports of natural gas, although similiarly restricted, more than doubled in value because of sharply higher prices. In contrast, receipts of farm machinery and passenger cars increased in value.

The 5 percent increase in the value of exports to Western Europe resulted from diverse movements in sales of major U.S. products. Large increases in wheat, corn, and tobacco sales were largely balanced by a big drop in shipments of soybeans and animal feed. Thus, agricultural sales to Western Europe, the largest U.S. market, were unchanged from 1974 to 1975. Largely because of strong growth in sales of oilfield and other construction machinery, power generating equipment other than engines, and materials handling equipment, machinery exports to this area rose by 11 percent. An offsetting decline, however, was reported in exports of electron tubes, transistors, and semiconductor devices. Shipments of coal advanced sharply, primarily because of higher prices, though some increase in volume was recorded despite the demand-dampening effect of reduced European industrial output.

Imports from Western Europe fell by 12 percent, with declines recorded in receipts of virtually all major products except machinery and footwear. The largest declines were registered in industrial supplies. Petroleum product imports fell by $695 million from their exceptional 1974 levels, when European oil products were purchased to help compensate for the crude supplies embargoed by Arab countries beginning in late 1973. Steel receipts were down by a similar amount, as U.S. consumption dropped with the cyclical downturn, and inventories built up the year before were drawn upon.

Over half of the $905 million fall in imports of European consumer goods

was accounted for by sharply lower receipts of passenger cars and parts. Excess inventories here were liquidated to support relatively strong domestic sales. Moreover, inadequate European production of some of the popular new models limited supplies available abroad for export. Continuing strong imports of most types of machinery were partially offset by lower values for aircraft engines and parts for transports.

Posting one of the few area declines in U.S. export sales last year, shipments to Japan fell by $1.1 billion. Demand for most U.S. products was weaker, principally because of the deep recession which began in 1974 and extended into 1975 in that country. Sales of machinery, chemicals, and agricultural products were all considerably reduced. Deliveries of aircraft were one-third lower than in the preceding year.

A major part of the $1.1 billion decline in imports from Japan was centered in smaller purchases of consumer goods, notably motorcycles, bicycles, and audio equipment. Entries of capital goods were lower because of a sharp drop in imports of small trucks and various types of electrical equipment. U.S. purchases of Japanese industrial chemicals were one-fourth lower in value. But steel arrivals increased year-on-year, despite a sharp falloff after large orders placed in 1974 were received in the first quarter.

Exports to Australia and New Zealand declined last year, while imports were unchanged. Demand for foreign goods was negatively affected by economic difficulties which included lower production, rapid inflation, and balance of payments problems. As a result, U.S. exports of many varied products to these countries fell, with sales of textiles, plastics, and paper particularly depressed. U.S. purchases from Australia were about $100 million higher than in 1974, with a particularly large rise in the value of receipts of alumina. All of the growth was accounted for by price increases, however, as the volume was slightly lower. In contrast, imports from New Zealand dropped by $100 million. Food imports from both countries fell as arrivals of meat and fish declined in value. Beef prices were much lower than in 1974, while the quantities received from Australia, in particular, were substantially higher.

The communist areas as a group purchased nearly 40 percent more goods last year from this country, but U.S. imports from them dropped somewhat from 1974 levels. The tripling of sales to the Soviet Union partly reflected heavy wheat and corn shipments in the second half, as a major crop failure in that country necessitated large imports for the second time in four years. Sales to the East European countries rose moderately, also reflecting expanded grain shipments. Exports of metalworking machines, farm tractors, construction equipment, and other types of machinery to both areas advanced substantially. In contrast, deliveries of commercial aircraft and parts to Eastern Europe which jumped to a $50 million record in 1974 fell to only $7 million last year.

Exports to the People's Republic of China decreased following a rapid rise in the two preceding years. The $500 million reduction reflected the termination of grain and aircraft sales at the end of 1974 and sharply lower shipments of cotton. Exports of some nonagricultural commodities rose, especially of aluminum and various types of nonelectrical machinery. There were no new contracts for commercial aircraft following completion of the $120 million sale in 1973-74.

The reduction in communist area purchases was concentrated in imports from the USSR and Eastern Europe. It stemmed primarily from a drop in receipts of platinum group metals and nickel from the USSR, plus a decline in imports of gold coins from Hungary from $50 million in 1974, when U.S. import regulations were liberalized, to almost nothing in 1975. Imports from the People's Republic of China expanded for the fourth straight year from their zero base in 1970. Greater receipts of tin and alloys accounted for almost all of the growth.

South Africa Offers Booming Market For Video Equipment, Film

Local press reports in the Republic of South Africa indicate a prospect of strong sales of cassette players, recorders, films, and related management and services during the next several years. This is a direct result of the introduction of television to South Africa and institution of the first full-time evening broadcasts in January.

Video cassette players should prove to be extremely popular with present and future owners of TV sets. Informed sources within the local television industry believe that sales of video players and recorders could be as high as 16,000 annually. The estimate is one for every ten color televisions sold—perhaps 160,000 annually during the next three years. Total demand for color as well as black and white television sets may reach 250-300,000 annually during the next three years.

At present, only two manufacturers of note—Sony and Phillips with their various models of video cassette players—are exploiting the market. However, it is anticipated that cassettes are likely to be superseded by video discs within the next few years.

Another area of market potential is sales of video film. At present, there is a noticeable lack of feature film materials available on video tape in South Africa. Local distributors are anxious to locate sources to meet expected demand from television owners anxious to increase equipment utilization. At present, broadcasts by the South African Broadcasting Corp., a semi-government organization with sole radio and television broadcasting rights in South Africa, are limited to five hours per evening, from 6-11:00 p.m. Also, the Sunday Observance Act of South Africa prevents places of public entertainment such as cinemas from operating on Sunday.

Finally, demand for video equipment and film may grow as South African firms and institutions become more aware of the potential of television for training of personnel and students.

EEC Suspends Tariffs On Aircraft, Parts

The EEC has totally suspended the 5 percent duty on aircraft of an unladen weight exceeding 15 metric tons falling within tariff subheading 88.02-B-II-c. This suspension, effective through Dec. 31, is the latest in a long series of annual suspensions of the duty on large aircraft.

In addition, the EEC has again suspended, in whole or in part, the duties on a wide range of products intended for use in the construction, maintenance and repair of certain specified aircraft. The products include certain plastic, glass, steel, aluminum and titanium items and certain gas turbines, pumps and compressors, refrigeration and air-conditioning equipment, heat exchange units, valves, bearings, transmission equipment, electric power equipment, radio and navigational apparatus, signaling apparatus, electrical and electronic components, lamps and lighting fittings, fire extinguishers, and precision instruments. The specified aircraft include the BAC III, Siddeley Trident, Airbus, Concorde, Mercure and F 28.

These suspensions are also effective during 1976 and are listed in EEC Regulation 3074/75 of the Council of Nov. 17, published in the *Official Journal of the European Communities*, Volume 18, No. L 311, Dec. 1. For further information regarding coverage interested U.S. firms should write to Regional Affairs for Developed Markets, Room 4002, U.S. Department of Commerce, Washington, D.C. 20230. Requests should contain a complete product description, including BTN, SITC, or U.S. Schedule B Export Commodity numbers, if known.

U.S. Tables Its Tariff Offers In Tropical Products Area

Palm products such as coconut meat and oils, cottage-industry products, handcrafted household items of tropical woods, fish products from tropical waters and products of natural rubber . . . these are kinds of tropical products on which the U.S. is being asked to reduce its duties by 37 developing nations in the so-called "Tropical Products Group" negotiations now under way in Geneva. This report gives details on the progress of the negotiations.

The United States has tabled its lists of products for negotiation of tariff reductions in the Tropical Products Group of the Multilateral Trade Negotiations (MTN). This was done March 1 in Geneva after extensive consultations with U.S. industry, agricultural and labor groups that would be affected by any negotiated duty reductions.

The offers, which are conditioned upon contributions to trade liberalization by interested developing countries, would reduce duties on approximately $1 billion of U.S. imports if fully implemented. The work of the Tropical Products Group is one of the more advanced in the MTN and a negotiated tariff reduction package is possible before the end of the year.

The U.S. offer is in response to requests made by 37 less developed countries (the Central American Common Market is negotiating as a unit) in the Tropical Products Group. The U.S. received requests for trade concessions on more than 650 products, which were mainly agricultural and raw material items but also included some manufacured products. The requests were analyzed for import sensitivity and to determine whether the products were principally supplied by LDCs. This was done to assure that any concessions made would principally benefit LDCs, and not other developed countries, since U.S. concessions will be made on a Most-Favored-Nation (MFN) basis, i.e., a concession made to one country will be granted equally to all others having this nondiscriminatory status.

The Tropical Products Group was established by the Trade Negotiations Committee (TNC) in February 1975 to insure that tropical products were treated as a "special and priority sector" within the MTN as called for in the Tokyo Declaration, which launched the present round of negotiations. The Declaration also refers to the importance of including LDCs in the negotiations.

The LDCs generally regard the progress of the Tropical Products Group as indicative of the usefulness of their participation in the MTN. A mutually productive outcome in this area is seen as crucial, also, for the realization of the U.S. objective that LDCs play a meaningful and responsible part in the MTN. As Secretary Kissinger pointed out to the UN Seventh Special Session last September, the U.S. believes that LDCs must participate responsibly and as fully as possible in the international trading system, and that the most effective way to do so is by their having a substantial stake in the smooth operation of the system. Within the MTN context, one of the means to give the LDCs such a stake is the achievement of early and positive results in the Tropical Products negotiations.

The Tropical Products Group has met four times in Geneva since being established. In October it reached agreement that initial negotiating offers would be tabled by developed countries by March 1. The U.S. delegation emphasized that this target date was contingent upon completion of its prenegotiating procedures, including consultations with industry, agriculture, labor and the Congress. The period between the October meeting and March was also used for bilateral consultations between the requesting countries and the developed countries, during which the latter gave their preliminary substantive reactions to the requests they had received and indicated, in general, the trade concessions they would expect in return.

At the most recent meeting of the Group, held last month, the main topic was how offers would be made and circulated. In addition, a number of LDCs stressed their apprehension that developed country offers might be insufficient in terms of product coverage and trade value and that some developed countries are unwilling to negotiate nontariff barriers in the Tropical Products forum. After a series of bilateral negotiations between offering and requesting countries, the Group will meet again in June for a progress review.

One of the issues that is still being addressed in the Tropical Products negotiations is the degree of reciprocity in trade concessions which the LDCs are willing to make. It is the general intent of U.S. trade policy that the LDCs make contributions to the MTN, although in accordance with the Toyko Declaration it is held that these should not be inconsistent with individual LDC trade, financial and development needs. The U.S. expects some degree of reciprocity for its tariff concessions and is prepared to make tariff concessions to the full extent of its Trade Act authority. However, the scope and depth of U.S. tariff cuts will necessarily depend upon the extent of LDC contributions to the negotiations.

Dent gave U.S. view

Ambassador Frederick B. Dent, the President's Special Representative for Trade Negotiations, touched on this point in Geneva last July, saying "We also believe that a parallel goal of these negotiations should be a greater acceptance of responsibility for the maintenance and strengthening of the international trading system by developing countries, especially by the more advanced of the developing countries. An improved trading system, combined with a successful policy for attracting and retaining capital investment, are likely to be the keys to an economically improved future for the developing countries."

Another aspect of the negotiations is a difference in approach among the developed countries. The United States is negotiating in the Tropical Products Group on a Most-Favored-Nation (MFN) basis. In contrast, the European Community (Common Market) nations, Japan and Canada reportedly are offering an expansion of their Generalized System of Preferences (GSP) coverage as well as MFN concessions. The U.S. view is that GSP is a unilateral, nonreciprocal, nonnegotiable, grant that should be kept separate from the MTN. (For a report on the GSP system, see *Commerce Today*, Dec. 8).

The Department of Commerce is currently collecting and analyzing information from various sources that will facilitate the presentation of a productive U.S. request list to those countries substantially benefiting from U.S. concessions. A full round of Industry Sector Advisory Committee meetings was held in February to receive industry views as to the priorities U.S. negotiators should establish when seeking concessions, to enhance market access for U.S. firms.

Requesting Nations

The following nations have submitted Tropical Products request lists to the U.S.:

Argentina, Bangladesh, Bolivia, Brazil, Burma, Central American Common Market (Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua), Colombia, Dominican Republic, Ecuador.

Egypt, Ghana, Hong Kong, India, Indonesia, Iran, Ivory Coast, Jamaica, Kenya, Malaysia, Mexico.

Nigeria, Pakistan, Peru, Philippines, Senegal, Singapore, Sri Lanka, Thailand, Trinidad & Tobago, Turkey, Uganda, Venezuela, Zaire.

Multilateral Trade Negotiations

This article is another in a series of progress reports on the multilateral trade negotiations, as prepared by the Commerce Department's Office of International Trade Policy.

GENEVA

The **MTN Subgroup on Meat**, in its third meeting last month, continued its work on a multilateral examination and analysis of all measures—particularly export and import—maintained in the bovine sector which have an impact on international trade.

The subgroup completed this aspect of its work program although it may return to it. Countries which had not yet notified the GATT of measures which they maintain in the meat sector were once again invited to do so to facilitate multilateral examination and analysis of such measures.

A U.S. proposal for establishing a procedure whereby a country could notify any tariff or nontariff measures affecting meat and meat products of interest to it and request consultations with that country was not accepted. A similar procedure has already been adopted for the MTN Group On Agriculture for dealing with trade restrictions other than those on grains, meat and diary, which are the responsibility of the individual subgroups. This procedure is in accordance with suggestions put forward by the TNC Chairman on Dec. 11. Next meeting of the subgroup: July 1-2 and 5-9. In the interim, provision has been made for possible informal discussions.

The **MTN Subgroup on Dairy Products** at its third session last month, continued its analysis of trade measures—importing and exporting—maintained in the dairy products sector by examining those applied in Hungary, Austria, Romania, Brazil and Spain. This first stage has now been completed, although any country wishing to revert to it could do so later.

The subgroup also discussed the existing GATT and OECD arrangements for skim milk and whole milk powder and butterfat. A major weakness of such arrangements noted by New Zealand was that the major dairy trading countries do not participate in them. The U.S. questioned the merits of international price agreements for such products. Australia suggested that better access to the world's import markets was the key to improving world dairy product trade and therefore thought the subgroup should systematically examine specific trade restrictions, whether tariffs or nontariff measures. Next meeting: July 12-16.

WASHINGTON

At the second meeting of the **Advisory Committee for Trade Negotiations** March 3 an overview of recent MTN developments, the oversight hearings of the Senate Finance Committee and recent International Trade Commission findings was presented by Ambassador Dent. Discussion then centered on U.S. approaches to tariff reduction negotiations; other topics handled were LDC issues, tropical products, border taxes, subsidies/countervailing duties, and standards. Next meeting: May 26.

Francis-Xavier Ortoli, President of the European Common Market, participated with President Ford in a **White House Meeting** to discuss U.S.-European economic relationships. He emphasized in his discussions with President Ford and at a press conference afterward that the preservation of liberal trade rules and the avoidance of protectionism are main objectives of his nine-nation Common Market organization.

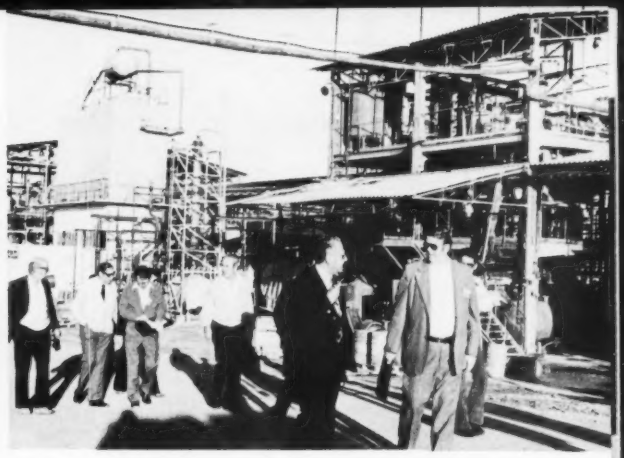
At meetings of all 27 **Industry Sector Advisory Committees** Feb. 17-23, after reviews of MTN progress, briefings were given on possible U.S. tariff-cutting formulas and reactions were sought from committee members. Each ISAC was given the preliminary governmental response to the advice and information contained in the committees' Industry Sector Advisory Reports and the process of "fine-tuning" the recommendations was begun. Members are being asked to comment on negotiating priorities and to submit advice on additional foreign tariff and nontariff measures not contained in the original reports.

At an **Industry Policy Advisory Committee** meeting Feb. 25, MTN progress and the results of recent ISAC meetings were reviewed, with discussions also held on tariff formulas and tropical products negotiations. This was followed by discussion of Senate Resolution 265 concerning the development in the context of the MTN of an international code of conduct on business ethics. Members agreed to respond further in writing. Next session: June 9.

At a combined meeting March 2 of the **Labor Policy Advisory Committee** and the **Labor Sector Advisory Committees** discussion concerned possible U.S. tariff-cutting formulas. Members were then asked to submit advice concerning the tariff formulas by mail.

At meetings of the **Agriculture Policy Advisory Committee** and the **Agriculture Technical Advisory Committees** Feb. 18-24 discussion was centered on possible U.S. tariff-cutting formulas and the tropical products negotiations.

PRESIDENT'S EXPORT COUNCIL TASK FORCE—*B. Otto Wheeley and Charles M. Hostler (left to right at head of table) led the discussion at the second meeting of the President's Export Council Task Force on Export Promotion. Wheeley is Senior Vice President of the Koppers Co. and vice chairman of the task force; Hostler is Director of the Bureau of International Commerce. The group continued its review of Commerce Department programs and was given a State Department presentation on U.S. commercial services abroad. Third meeting is scheduled for September.*



MISSION IN ISRAEL—*In photo above, U.S. chemical equipment mission visits the Dead Sea Works at Sodom. In photo at right, group tours the Beersheba Bromine Compounds, Ltd. Itinerary included four installations in Haifa Bay area.*

Mission To Iran, Israel Cites Strong Chemical Industry Equipment Market

A message for U.S. firms interested in tapping the multi-billion-dollar market in Iran and Israel for chemical and petrochemical equipment: recognize the importance of direct contact with decision makers—especially in government, as much of the investment in these industries is through government-owned or -controlled organizations.

The National Iranian Oil Company in 1976-80 plans to spend some $7.5 billion to expand its chemical and petrochemical industries. During the same period, the chemical industry in Israel plans to spend more than $1 billion to increase its productive capacity in such fields as phosphates, fertilizers and basic chemicals; and for this program, the Government of Israel has established a fund to finance up to 50 percent of the cost of research projects.

A few U.S. manufacturers and distributors are already participating in these programs. Others are interested but do not know how or whether to begin. According to the Commerce Department's Herbert J. Cummings, who led a recent trade mission to the two countries, several tips surfaced during exchanges among the U.S. participants on the peculiarities of these markets:

- Most of the decisions—from research and development through equipment purchase, service, and maintenance—are made by government officials within particular ministries and/or managers of government-owned industrial establishments. The first step is to locate these organizations and individuals, and in Iran, to recognize that considerable patience, consummate tact, and cultural sensitivity will be required to convert a prospect into a customer.
- Emphasis in both Iran and Israel is on obtaining up-to-the-minute technology.
- Agents must be selected with care and discretion to satisfy local authorities that useful service, as defined in local regulations, will be rendered.

MISSION IN IRAN—*Director Herbert J. Cummings (right), at U.S. Trade Center in Tehran, discusses business leads.*

Most of the nine members of the mission represented medium- to small-size firms. All had previous export experience but only three had exported directly to Iran or Israel. William E. Brown, Thermon Manufacturing Co., San Marcos, Tex., said, "We will definitely sign a contract with a sales representative whom we met as a direct result of this mission." John Dixon, Southern Heat Exchanger Corp., Tuscaloosa, Ala., said, "For Southern, the mission was an introduction to two important growth markets, and a good education." Robert S. Allen, World Wide Construction Services, Wichita, Kan., said, "I would expect that our company would set up an office in the Near East within the next two years." Most of the members expect to revisit these markets within a few months, Cummings reports.

Although trade missions from Europe, Asia, and North America are "a dime a dozen" in Tehran, the U.S. group got coverage in some of the leading papers. In Iran, members attended meetings with these organizations:

- National Iranian Oil Company (NIOC), from which the mission learned that procurement generally results from direct contact with the manufacturer rather than through an agent; NIOC is not particularly interested in joint ventures; most procurement is through competitive bidding; three copies of catalogs with prices and conditions may be sent by interested firms to Ali Taymourian, Chief of Procurement, NIOC 2501, Tehran, Iran.
- National Petrochemical Company, affiliate of NIOC, formed in 1966 to develop the petrochemical industry.
- Industrial Credit Bank, an agency of the Government's Plan and Budget Organization, which conducts feasibility studies on proposed chemical and petrochemical projects.
- Iran Chamber of Commerce, Industries and Mines. All importers and exporters in Iran must be members of the Chamber.
- Industrial Development and Renovation Organization, whose major responsibility is "essential industries" that are not likely to be developed by the private sector.

The mission's stay in Israel was highlighted by several visits to industrial installations: Oil Refineries Ltd., Chemicals & Phosphates Ltd., Electrochemical Industries (Frutarom) Ltd., and Haifa Chemicals Ltd. in the Haifa Bay area; the Dead Sea Works Ltd.; and Makhteshim Beersheba Ltd. and Bromine Compounds Ltd. in the Beersheba area.

The first-hand experience gained by the mission will be shared with other U.S. businessmen interested in entering these markets, as the members participate in various trade seminars, TV and radio discussions, and export expansion meetings in their respective communities.

Trade Fairs, Centers

Office Equipment Sales In Sweden: Expansion Seen For Some Products

Prospective Swedish regulations affecting safety, noise levels and increased documentation requirements are likely to enhance the market for office equipment in that country, particularly in such items as microfilm and newly designed collators and sorters.

This was one of the marketing tips noted recently by American exhibitors of office and business equipment at the U.S. Trade Center for Scandinavia in Stockholm. The show participants observed that their equipment was not encountering serious price disadvantage and appeared to have a technological lead.

Products with the best potential are considered to be microfilm systems, office copiers, electrostatic copier/converters and master imagers, cash dispensing terminals, desktop computers, electronic cash registers, and office offset and other printing machines. Products with moderate potential are collators and sorters, voice-graphic communications, pocket calculators, and office EDP terminals.

Although an attractive price assists in the introduction of a new line of office EDP terminals or to convince a user to convert to electronic cash registers, for example, other market factors are the determining ones. A major Swedish government buying authority commented just before the show that initial price is not nearly as significant in the purchase decision for new office equipment by a government body as previous experience with a manufacturer's products and service experience with the Swedish representative.

In microfilm systems, three U.S. companies dominate, with only one German and one Japanese company seriously competing. The many entries on the market with just microfilm readers have not been successful unless a local firm has incorporated them into a system, as purchasers prefer to be able to buy all components from a single distributor. The poor prospects for addressing machines probably stems more from market saturation than technological lag.

U.S. copy paper has a good market in Scandinavia but Finnish competition is growing. U.S.-name copiers made in third countries will increasingly be a factor, as is the situation in computer peripherals.

The 14 U.S. exhibitors representing 28 companies sold almost a quarter of a million dollars' worth of equipment during the show, and project first-year sales at $3.4 million.

U.S. Water Treatment Equipment Draws Top Interest In Milan

The 30 exhibitors at the Milan U.S. Trade Center's PURARIA–PURACQUA exhibition late last year reported very good interest in their pollution control equipment—especially those items related to water treatment. The exhibition was held concurrently with RICH–MAC, an international chemical instrumentation show.

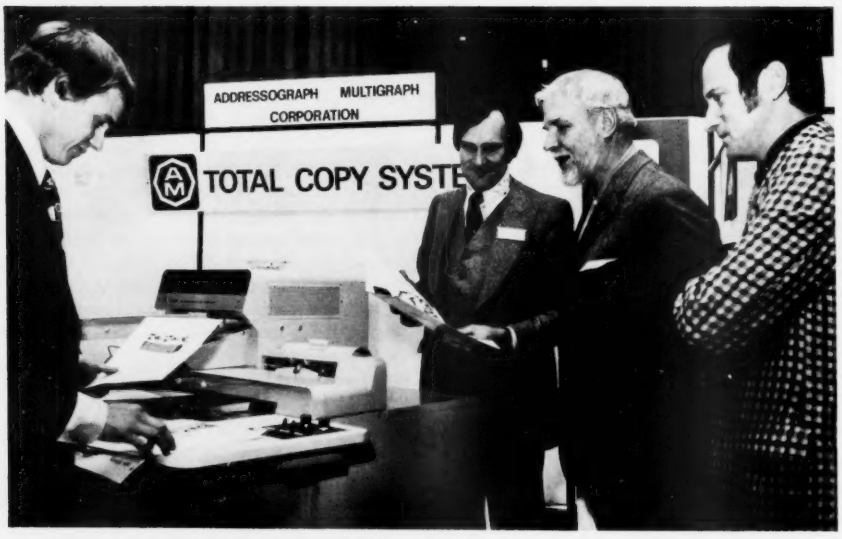
The Italian market for air and water purification and pollution control equipment is expected to grow to nearly $400 million in 1978, representing a 35 percent annual increase. With Italian industry almost completely unprepared for this growth in demand, U.S. firms, already capturing 15 percent of the market, have a good opportunity to increase their future sales.

Water purification and pollution control equipment is especially highlighted as an excellent growth area. Estimated 1975 Italian purchases of water supply equipment were $57 million and wastewater equipment $44 million, with 1978 predictions at $125 million for water supply equipment and $121 million for wastewater equipment.

Predictably, the products with best sales potential at the exhibition were systems for treatment of industrial wash water, packaged water treatment plants, packaged portable water plants, portable distillers, clarifying equipment and sludge processing equipment. Also, in the air pollution control sector, spectrophotometers and infrared air pollution analyzers and samplers were considered products with good market potential for U.S. manufacturers.

J. H. Kutscher, manager of export sales for Electric Machinery Mfg. Co., Minneapolis, exhibiting magnetic drives and generators, summed up this show well by saying, "I was somewhat skeptical about the chances of success prior to the show but have been pleasantly surprised and pleased by the very good results of our participation."

Reflecting this favorable reception were orders totaling $319,110 written during the show and projections of an additional $3.3 million worth of business in the next 12 months.



ADVANCED BUSINESS EQUIPMENT—*At U.S. Trade Center in Stockholm, sales engineer Magnus Zetterqvist (center) of Addressograph-Multigraph AB demonstrates offset master production to printing managers from Swedish companies.*

Tashkent, USSR, Is Site Of Cotton Processing Show

The USSR Chamber of Commerce is sponsoring a specialized international exhibition of cotton cleaning equipment in Tashkent, Oct. 14-24. Featured will be automated systems for conveying and storing raw cotton and seeds, primary processing equipment, seed cleaners, and units ranging from seed preparation and harvesting equipment to drying systems and quality controls.

Interested firms should send 10 copies of catalogs to USSR Chamber of Commerce and Industry, Directorate of Foreign Exhibitions in the USSR—Cotton '76, Sokolnicheski val l-a, Moscow 107232. For additional information contact Robert B. Dollison, Bureau of East-West Trade, U.S. Dept. of Commerce, phone 202-967-4002.

U.S. ANTI-POLLUTION SHOW, USSR— *An exhibition/seminar on equipment and technology for monitoring and controlling air pollution,* CLEAN AIR *'76, was held last month at the U.S. Commercial Office in Moscow. High-level officials from Soviet ministries and buying organizations attended, as seven U.S. companies displayed their products and presented papers. In photo above, left, U.S. Ambassador Walter J. Stoessel Jr. delivers opening remarks; Thomas Niles, Commercial Office director, looks on. Other photos, counterclockwise: Director Yuriy Izrael of* HYDROMET, *Soviet agency for administration of hydrometeorological services, speaks at same session; Soviet specialists observe the Anatole J. Sipin display of gas collection bags; show participant George Colovos explains Rockwell International air monitoring center's capabilities to Soviet guest; Donald Lewis of Meloy Laboratories (center) answers questions by interested visitors; and Karl Wessely demonstrates a Hewlett Packard gas chromatograph. Three exhibitors sold every display item they brought; total floor sales reached almost $161,000; 12-month orders are estimated at $3.9 million. For each of the lectures, an excellent turnout was reported.*

Worldwide Business Outlook

Japan's Interest In Imports Grows As Recovery Nears

Recovery from Japan's longest, most severe post-war recession is slow in getting under way. Consumption is stagnating, business investment in plant and equipment continues to decline, and unemployment persists at a level which is high for Japan in view of its traditional lifetime employment system. Nevertheless, 1975 did show some increase in economic activity over the recession year of 1974. Further acceleration is expected during the current year in response to a program of cautious fiscal stimulation adopted by the Japanese Government and as business and consumer confidence returns, reports the U.S. Embassy in Tokyo.

The rate of inflation has continued to decline. The 12-month increase in the consumer price index dipped to 7.5 percent in December. As inflation subsides, real wages are beginning to rise and should eventually provide the basis for an increase in consumer spending. Although the timing of the recovery is uncertain, the Japanese economy remains basically sound.

Government policies continue to aim at a gradual recovery to moderate long-term annual growth rates between 5 and 6 percent. Small shifts in industrial structure are already under way, with emphasis on industries of higher technology and lower pollution potential.

As a result of the recession, Japan's imports from the United States in 1975 lagged behind the record pace of 1974. They remained above 1973 levels, however, and can be expected to increase when Japan's economic recovery accelerates, probably during the course of 1976.

The exact timing is not clear, but it does appear that Japan will probably be the first major market outside the United States to recover from the worldwide recession. American exporters that give priority to Japan in their marketing plans and strategy should find themselves in good position to participate in the economic recovery.

Pinpointing the best prospects

In the meantime, sales opportunities do exist for certain product lines, particularly where inflation in Japan has improved the competitive position of imported goods. Among these lines the Embassy has identified marine and oceanographic equipment, automobile parts and equipment, hydraulic equipment and components, and mechanical handling equipment. Other promising product areas for exports to Japan are computers, peripherals, and data communication equipment; electronic components, pollution control and measuring equipment; analytical instruments; food processing and packaging equipment; test and measuring equipment for the electronics industry; biomedical equipment; avionics and ground support equipment; printing and graphic arts equipment; and building systems and materials.

Exhibitors at the U.S. Trade Center in Tokyo over recent months have expressed optimism based on both spot and 12-month projected sales in product areas covered by four promotions—electronics industry production and test equipment, oceanographic/marine equipment, biomedical equipment and microwave instrumentation, circuits and components.

Prospects for selling U.S. consumer goods are also encouraging. Over 30 Japanese department stores, involving several national chains, plan promotions of United States products during the bicentennial year, and some 60 firms have joined in a sales campaign sponsored by the Embassy. The Embassy and Consulates organized five groups totaling 231 Japanese buyers to visit American trade shows during the second half of 1975—in the areas of housewares, hardware, men's sportswear apparel, and outdoor amusements. Final reports have not been received from all these groups, but three of them reported a combined $1.2 million in spot sales and $14 million in one-year projected purchases.

The improved world food supply situation has resulted in somewhat less attention being given by Japanese authorities to the problems of stabilizing their food supplies and obtaining long-term supply commitments. While the government has proposed a five-year program to gradually expand food reserves, it is currently concerned with handling and financing surplus rice production. Total U.S. agricultural exports to Japan in the period April-September 1975 declined 12.5 percent on a value basis from the same period in 1974. The outlook for substantial increases in U.S. agricultural exports in coming months is not bright. The demand for feedgrains is not expected to approach the 1974 level for several months. Quotas for the importation of 50,000 metric tons of beef have been issued, but shipments from the United States have been limited. Chemical problems continue to hamper fruit shipments. Greater availability of some commodities in other countries and the possibility of lower prices for U.S.-supplied commodities point to some reduction in the value of U.S. agricultural exports to Japan.

The Japanese Government in December

JAPANESE IN IOWA—*Acting Ambassador to the U.S. and Mrs. Seiya Nishida look at a wiener-making machine during tour of Townsend Engineering Co. plant in Des Moines last month, one of several stops on a three-day Iowa visit. From left, Ted Townsend explains the product to the Japanese couple, with Dean Arbuckle, Director, Int'l Div., Iowa Development Commission; Ray Townsend, company president; and Jesse N. Durden, Director, Des Moines Commerce District Office.*

liberalized restrictions on foreign investment in the manufacture, sale and leasing of computers, peripherals and terminals to allow 100 percent foreign ownership. This development has been eagerly awaited by U.S. computer firms; some have already established wholly-owned sales and servicing subsidiaries and a number are actively exploring manufacturing operations.

The government continues to follow its program gradually to permit 100 percent foreign investment in most industrial sectors. Three industries still restricted to not more than 50 percent foreign ownership but scheduled for liberalization by May are information processing and manufacture of fruit juices and photographic film. This leaves four industries indefinitely postponed from liberalization—agriculture; forestry and fishing; petroleum and petroleum products; and leather and leather products. In general, economic conditions have had an impact on investment decisions by foreign as well as domestic investors in Japan. Consequently, new direct foreign investments have lagged slightly even though the government has continued to implement its investment liberalization policy.

Germany On Upward Cycle; Trade Seen Leading Revival

Germany has passed from a period of economic recession to one of growth in recent months, reports the U.S. Embassy in Bonn.

GNP, industrial production, capacity utilization and business opinion all support the thesis that an upturn is under way. How strong and enduring it will be is uncertain. Last year's 3.5-4.0 percent decline in real GNP will give way to positive growth this year that could be as low as 2 percent or as high as 6 percent. Expert forecasts of 4.5 percent growth have been endorsed by the government, but labeled as optimistic by others.

Just as an export drop in 1975 contributed to the German economic decline, exports are now expected to fuel the projected recovery in 1976. Despite earlier hopes that domestic demand would lead the way, this no longer seems likely. Expectations for a substantial investment increase are key to a strong recovery scenario, but business plans do not reflect much enthusiasm. High unemployment will probably persist even if there is a healthy recovery. Moderate wage demands are therefore the current picture, as are squeezed profit margins. Business would like tax relief, but public sector finance is heavily in deficit and the pressure is on for government to close the revenue-expenditure gap.

The bilateral trade picture

German imports from the United States during the first nine months of 1975 were practically identical to what they were in the comparable period in 1974. Overall imports were up 1 percent. The U.S. market share was 7.7 percent, as in 1974. Forecasts of nominal German increases in 1976 range from 5 percent to 14 percent. Assuming that imports from the U.S. totaled 14 billion deutschemarks in 1975, and that the United States will share equally in import growth, then it looks as though 1976 will see DM 0.7 to 2.0 billion in additional sales for U.S. exporters to Germany.

The role of agriculture in U.S. exports to Germany has been considerable, though it has declined slightly of late. During the January-September timeframe, agricultural products accounted for 26.6 percent of total goods imported from the United States in 1975, as compared with 29.8 percent in 1974 and 30.0 percent in 1973. A diminution in soybean prices seems to have been principally responsible for last year's decline. The corollary is, of course, that non-agricultural imports from the United States increased somewhat in 1975.

The bilateral trade balance between the United States and Germany was favorable to the latter by DM 2.9 billion in 1974 and by DM 3.4 billion in 1973. There was a significant turnaround in 1975, however, with the first nine months showing the balance favorable to the United States by DM 1.2 billion. This was not due to increasing U.S. exports, but rather to shrinking U.S. imports from Germany. German exports to the United States were running at a 29 percent lower rate than in 1974.

Dollar-DM relationship

Until June the DM had been gaining on the dollar in the exchange rate relationship. There followed a significant reversal which saw the dollar gaining by some 12 percent between June and early December. Favorable economic news in the United States undoubtedly played a role in this development. The net result in 1975 was appreciation of the dollar in relation to the German currency by around 10 percent after it had depreciated by 24 percent in relation to the DM between January 1973 and the end of 1974. The trade effects of these shifts in rates should be borne in mind when analyzing past performances and future possibilities for sales growth.

An idea of the more dynamic sectors on the German industrial scene, and therefore an indication of the chances for suppliers, is gained from a recent forecast by a private research institute. Automobile production is seen growing by 10 percent this year. On the other hand, the number of registered automobiles, which grew by 4 million between 1970 and 1975, is predicted to increase by only 1.9 million between 1975 and 1980. The medium-term outlook is therefore for growth at less than half the previous rate. In 1975, the chemical sector suffered its first annual production decline since the end of the war, with a 16 percent drop being the probable end result. This year, however, an approximate 10 percent increase is thought possible. Plastics dropped by 10 percent last year, and 1976 is seen as having a 6 percent increase likelihood. Machinery production was estimated to decline by 7 percent in 1975, and grow by 3-4 percent in 1976. Electrotechnical capital goods are thought set for a slow start in 1976, with the yearly increase to be 3 percent. Consumer goods do not seem to have any more than a 2 percent production increase possibility, in line with the private consumption real growth forecast. Overall industrial production is predicted by the institute's report to grow by 4 percent in 1976.

Surveys point to U.S. strengths

Although covering only 1.4 percent of the German market for communications equipment, the United States is the most important supplier of this line to Germany. In some sectors we face negligible competition, i.e., satellite technology, microwave components and data communications equipment as well as test and check instruments. It is in the field of new technology, rather than the conventional, that U.S. prospects are brightest in this market, according to a recent market survey contracted for by the U.S. Department of Commerce.

American business equipment and systems are similarly at a market advantage due to what is recognized as their advanced stage of development. Furthermore, their reliability and low operating costs instill confidence not normally placed in these products from Japan or even Germany. The U.S. import market share for this type of equipment is forecast to rise from its present 14 percent level to 19 percent by 1979, according to a market research survey.

Another survey indicates a 12 percent annual growth rate in German imports from the United States of nuclear detecting and monitoring equipment, which is relatively unaffected by business cycles. The United States currently controls 12.5 percent of this market.

Equipment For Agriculture, Industry Gets Top Import Priority In Pakistan

Pakistan is a country with considerable potential for development. It enjoys good agricultural land, a well-developed administrative system, and a better trained, educated class than many developing countries. The government has ambitious development plans, with the priority goal of achieving self-sufficiency in food and certain key manufactured products.

The past few years have nonetheless been difficult ones, continues Gary D. DeVight, Commercial Officer at the American Consulate General in Karachi. The external trade deficit reached over $1 billion last fiscal year, and is likely to equal or exceed that level during the current fiscal year. Problems with the weather and with Tarbela Dam have contributed to a less than hoped-for increase in agricultural production. The recession in the industrial countries, too, has cut into both export receipts and industrial production in the key textile sector.

Aid flows from both traditional western donors and OPEC countries, however, have been substantial. Last year, this financed virtually the entire trade gap, and is likely to do almost the same this year. The problems with Tarbela Dam seem to be approaching resolution, and the coming economic upturn in the industrialized world should revive both textile output and exports.

Pakistan's economy was badly hit by the rapid increases in the cost of petroleum and related international price increases. Inflation jumped to about 30 percent in FY 74, eased down to about 24 percent in FY 75, and for this year is expected to be around 10 to 15 percent. It thus appears that barring some new shock, Pakistan is returning to more stable prices.

Leading areas for U.S. sales

While the Fifth Five-Year Plan (1976-1981) is still in the planning stages, it would appear that best prospects for sale of U.S. goods and services lie in the areas of transportation equipment including railroad equipment and commercial vehicles; tube and tire manufacturing and retreading machinery and equipment; cement manufacturing equipment; chemical and fertilizer machinery; rice milling equipment; construction equipment; agricultural equipment; and telecommunications equipment. In spite of some problems, American cotton textile equipment continues to enjoy good marketing potential in Pakistan, with the emphasis being put on upgrading spinning mills into fully integrated textile plants.

Pakistan is attempting to move toward more self-sufficiency in the manufacture of industrial goods but still has a long way to go. With the drive to industrialize, there is a major market for more sophisticated general purpose equipment such as large compressors and boilers, high-speed centrifuges, instrumentation and control devices and other components. Those American companies offering locally manufactured parts in plant construction will stand the best chance of winning bids for major projects.

Public Sector: The Pakistani plan for a mixed economy reserves to the public sector most areas of heavy industry, petrochemicals and utilities. With few exceptions, this means that most large enterprises from now on will be concentrated in the public sector. Joint ventures between foreign private entities and public sector companies will be considered on a case-by-case basis.

Recently announced plans of the government call for investment of $3 billion in state enterprises during the next five years. This includes an integrated steel mill, three fertilizer plants, and several cement plants, as well as expansion of already established chemical plants and refineries. Pakistan is fortunate in having significant natural gas fields that will provide most of the feedstock for its fertilizer industry.

The government is putting more emphasis on investment in agriculture and agriculture supporting industries. This is reflected in plans for construction of three fertilizer plants at an estimated cost of $600 million. One of these, the Mirpur Mathelo Fertilizer Project, is being financed by a $50 million ADB loan combined with a loan of $50 million from the kingdom of Saudi Arabia and $30 million from the Saudi Fund for Development. With the funds coming from untied sources, this project provides an excellent opportunity for American manufacturers of fertilizer plant equipment as well as engineering firms specializing in the design and construction of such projects to sell their products.

In keeping with this agricultural emphasis, the Industrial Development Bank of Pakistan (IDBP) is looking carefully into private ventures for food processing and canning plants. Since part of the foreign exchange financing for IDBP comes from untied sources, American manufacturers of food processing equipment should consider selling to the Pakistani market. Pakistan is also interested in joint ventures or licenses for assembly or manufacture of tractors and farm implements.

The ADB has also approved a $22 million loan to the Karachi Electric Supply Corp. for installation of a gas turbine generating system consisting of three or four simple-cycle type gas turbines with total capacity of 80 to 100 MW. This project is to include construction of a substation and communication facilities to connect the generating station to the power grid. International bidding has already started for the main units.

Other projects under consideration by ADB include water supply schemes for Lyallpur and Hyderabad and construction of a bulk cargo and petroleum port at Qasim. Projects to be financed by OPEC aid, and joint ventures with OPEC participation, include an oil refinery, textile mills, livestock projects and a cement plant.

The Indus Super Highway, Lowari Tunnel and several proposals for large-scale farm projects are three public sector items which hold very strong appeal to Pakistani political leaders but have been slowed down for budgetary and other reasons. U.S. suppliers of goods and services for highway construction, major tunneling and agricultural consulting/management services should attempt to make their products and services known in Pakistan.

Private Sector: Private investment in Pakistan has revived somewhat in the past year in small and medium-scale ventures. The Bhutto Government has pledged that no further nationalization will take place during its current term, which expires in August 1977. In the event that further nationalization takes place at some future date, a reasonable and comprehensive compensation formula has been developed and published. The government recently announced that it would allow the cashing in of bonds issued during the 1972 nationalization of heavy industry and financial institutions if the funds are to be used for new investment. An unusual feature of Pakistan's nationalization action is the government's avoidance to date—with the exception of life insurance—of nationalizing foreign-owned or partly foreign-owned enterprises.

Private industrial investment will be permitted in those fields not reserved to the government. These include small industries, textiles and food processing plants. Another important area left to private enterprise is construction. Pakistan is suffering from a shortage of hotel space and to meet this need, Hilton, Holiday Inns, Sheraton and Hyatt have units under construction or in the final planning state. In addition, many older hotels will be undergoing renovation in the next few years. Hotel and restaurant equipment should sell well as a result.

The stated policy of the Pakistan Government is to welcome foreign investment

but, in general, the government expects potential foreign investors to prove that they have some special contribution to make to the Pakistan economy. This usually means substantial capital imports, sophisticated technology and/or new export markets. Foreign companies investing in Pakistan will find a fairly well-trained and motivated workforce available at relatively low wages. Government treatment of foreign investment is mixed, however, with price controls being a frequent complaint. Local private capital has shown some interest in joint ventures as a means to assure more security against future nationalization.

Some investors show interest

Some existing foreign investors are increasing their productive capacity, mostly out of retained earnings or from local capital. A few Arab investors have joined in joint ventures with the government in a fertilizer and refinery project, and are considering investments in some large farms. An American chemical company is planning a joint venture investment in a fertilizer plant, with AID and World Bank assistance expected. An American tobacco company has increased its investment in a large Pakistan cigarette company to 49 percent. The overall level of new foreign investment remains, however, low.

Pakistan's location next to the rich market of the oil-producing states should also not be overlooked. Some American firms have recently been looking at Karachi as a handy location for servicing this growing market. With excellent air connections and relatively reasonable office rents, Karachi has much to attract those interested in setting up a Near East office.

With imports expected to be more than $2 billion in 1976, Pakistan can be a significant area for American sales. The bulk of these imports will be paid for out of Pakistan foreign exchange earnings, U.S. AID or untied sources.

The key to successful marketing in Pakistan on a continuing basis is representation by an aggressive, competent local agent. With a large percentage of the foreign buying decisions now in the hands of governmental or semi-governmental agencies, this is especially true. Tenders issued by public sector agencies often have short lead times and thus require the presence of an agent in Pakistan. At the least, this agent can obtain tender documents, file necessary registration forms, report results, etc.

An important adjunct to the sales efforts of any local agent is an occasional visit by top sales executives of American firms. Such stops can readily be combined with visits to the nearby attractive markets of Iran and the Gulf states.

Yugoslav Growth, Investment Terms Attract Business

Twenty years of sustained economic development and prospects of continued market growth provide the setting for U.S. suppliers interested in doing business in Yugoslavia. Opportunities exist for direct sales and joint ventures in nearly all sectors of the economy, especially energy, raw materials, metal processing, chemicals, food processing and communications. U.S. suppliers interested in taking advantage of these opportunities are urged by Wallace F. Holbrook of the Bureau of International Commerce to familiarize themselves with this socialist market economy and the liberalized investment policy outlined in the Yugoslav Investment Law of 1973.

Since 1956, an average annual growth rate exceeding 7 percent in real terms, higher than in most West European countries, has resulted in a significant increase in Yugoslavia's standard of living and in development of a relatively large and increasingly modern industrial sector. The rate of investment has also been high, ranging between 25-30 percent of GNP over this same period.

One result of continuing growth has been an increased capital shortage. In addition, local industry has not always been situated in the most desirable areas from the standpoint of marketing or raw material supply, nor has it been concentrated enough to enjoy economies of scale. These factors, combined with desire to obtain modern technical, managerial and marketing skills and to achieve wider penetration of foreign markets, have led the Yugoslavs to adopt progressively liberal investment laws aimed at facilitating the entry of foreign capital into the country. In January 1973, the Overseas Private Investment Corporation (OPIC) and the Yugoslav Government reached agreement by which OPIC provides protection against risks of expropriation, inconvertibility of funds or property damage from revolution or insurrection.

To further refine the investment purposes for which domestic and foreign capital can best be employed, the Federal and regional legislative assemblies of Yugoslavia are now considering a long-term development program (through 1985) which designates areas of the economy where expansion is given highest priority. Top importance is to be placed on production of energy, raw materials, and food; some expansion of transport, communications and tourism is scheduled as funds permit.

The storage of energy has become a restrictive factor in industrial development. By 1985, the projected need for electric energy will be 100 billion kwh or 2½ times present production. During the next five years expenditures of some $3.5 billion are foreseen for energy systems, with up to 25 percent expected to come from foreign sources. Best sales possibilities include turbines, generators, boilers, control panels, regulating systems and accessories.

Raw material development, especially of mineral and forest resources, is expected to contribute to industrial advance and to lower import needs, thereby reducing the strain on foreign exchange. Yugoslavia is the largest producer of non-ferrous metals in Europe and has great potential for further growth. Emphasis is being placed on prospecting for and development of iron, copper, lead, zinc, nickel, antimony, chrome and soft coal reserves. The drive toward these goals will result in additional opportunities for sales of U.S. equipment and machinery as well as joint ventures.

Metal processing also occupies a central position in long-term development policy. Leading sectors will include the motor vehicle industry, electrical engineering and power installations, processing industry installations, agricultural machines, machine tools and transportation and communications equipment. Some of these sectors are among the most dynamic of the Yugoslav economy, e.g., electrical engineering.

Metal fabrication and the production of non-electric machinery have expanded substantially since 1965, but the industry is still characterized by many small enterprises that duplicate production. Consequently, import demand will remain high until further rationalization of the local industry is accomplished. U.S. equipment enjoys a high reputation despite its small share of the market.

Other areas of prime opportunity for

U.S.-Yugoslav Council Looks At Joint Ventures

The U.S.-Yugoslav Economic Council plans a seminar on Joint Venturing in Yugoslavia at the Engineers' Club in New York on April 8. The session is aimed at providing international executives with specific information on Yugoslav business and accounting practices as they relate to establishment of joint venture operations. James C. Conner, Senior Partner, Bowman & Conner, will chair the meeting, which will feature a number of speakers with special knowledge of the Yugoslav business system.

Write U.S.-Yugoslav Economic Council, Inc., 51 E. 42nd St., Suite 1504, New York, N.Y. 10017.

U.S. business include agricultural machinery and equipment—especially the larger, more complex type, packaging and processing equipment, and industrial machinery.

Rights, conditions are spelled out

The 1973 Investment Law emphasizes both foreign investor rights and conditions of investment. The law puts a joint venture within the framework of the self-management system, but allows considerable flexibility in negotiation of the contract between the participating Yugoslav and foreign firm.

The 1973 law also recognizes the right of a foreign investor to participate in the income of a joint venture and, with qualifications, to transfer profits. A foreign firm can reclaim its original investment capital and may sell its rights to either a Yugoslav or a foreign company. The law also provides for inviolability of the investment contract even when subsequent revisions of the investment law may prove less favorable to the investor than the original contract. Adjudication of disputes can be performed by outside parties if so specified in the contract.

After signature by the parties to the joint venture, the agreement is reviewed by the Federal Secretariat for the Economy in Belgrade. This review ensures that conditions set forth in the investment law are met. One major condition is the 51-49 percent principle, according to which a foreign firm cannot invest a greater amount in a joint venture than a Yugoslav firm.

At present, joint ventures are not allowed in banking, insurance, internal traffic, commerce or public services. This may change soon in the case of banks.

There has been substantial response to the incentives set forth in the investment law. Latest available figures (1974) indicate that there are nearly 100 joint ventures with a total capital investment of $800 million, of which direct foreign investment accounts for $135 million or 17 percent. Leading foreign investors were Italy (25 firms), West Germany (20) and the United States (14). U.S. participation in joint ventures was valued at $28.5 million and has been mainly in consumer products, chemicals and light industry, with more in wood products, plastics and steel. Pending projects by 11 U.S. companies are valued at $80 million.

Under the Yugoslav concept of ownership, possession of land, buildings and equipment is vested in the people of the country as a whole. Workers in a factory or commercial enterprise, however, are entitled to make use of a facility and benefit from its profits. As trustees of the property for society as a whole they are required to set aside funds to cover capital depreciation before bonus payments can be made from profits.

Joint venture agreements can be made by the foreign company with the basic organization of associated labor or with larger organizations of economic units called enterprises. The members of the basic organizations or enterprises elect Workers Councils who set the general outlines of the enterprise's commercial policy and oversee its execution. The Workers Council, in turn, selects a director (manager) who is responsible for execution of company policy. The terms of a joint venture agreement must be approved by the Workers Council of the enterprise before being sent to Belgrade for review.

In view of the general nature of the investment law, relations between participants in a joint venture will be largely determined by the provisions of the contract negotiated between them rather than by provisions of the law itself. For this reason, particular care should be taken to include detailed statements governing the operations and structure of the joint venture. In a typical agreement the Workers Council can agree to delegate substantial operating authority to a Management Board; the contract may then provide for the composition of the board and its powers. The Workers Council will normally retain for itself final review of annual plans while leaving operation of the venture to management.

A foreign investor may have equal representation on the Board of Management although he has less than half equity interest in the venture. The director of the venture must be a Yugoslav citizen, although it is possible for a foreign partner to hold other executive positions; some agreements provide for chairmanship of the Management Board to alternate between the Yugoslav and the foreign partner(s).

Foreign participants should give special attention to familiarizing themselves with Yugoslav accounting concepts. Otherwise, participants to an agreement may, in good faith, be using apparently similar concepts which, in point of law, have varying significance.

Taxation, repatriation terms

Taxation on the foreign investor's profits is set by the individual Republican State Governments. In the more industrially developed republics of Slovenia, Croatia and Serbia, the withholding rate is 35 percent, while in other republics it drops to 14 and 20 percent. The effective withholding tax can be substantially lowered by reinvesting profits in Yugoslavia or placing them in bank deposits. Negotiations on a tax treaty between the U.S. and Yugoslavia are in progress.

Repatriation of profits and capital from a joint venture in Yugoslavia is generally dependent upon the foreign exchange earning capacity of the venture. Under existing foreign exchange regulations, one-third of a joint venture's hard currency earnings are available for profit transfer. A portion of the remainder may be available for either transfer of profits, import of materials and equipment and/or replacement of capital equipment, depending upon priorities established by the joint venture management.

The privately-funded U.S.-Yugoslav Economic Council, headquartered at 51 East 42nd St., New York, N.Y., 10017, organizes meetings and seminars where its members and Yugoslav counterparts can exchange information on commercial and joint venture opportunities. Other organizations useful to U.S. investors interested in doing business in Yugoslavia include OPIC and the International Investment Corporation for Yugoslavia (IICY) based in London. The U.S. Export-Import Bank has over 20 programs to finance U.S. export sales.

The Bureau of International Commerce is preparing two Overseas Business Reports on this subject, *Joint Ventures in Yugoslavia* and *Trade and Investment Opportunities in Yugoslavia,* that are scheduled to be available from the Superintendent of Documents in May.

FOCUSING ON U.S.-YUGOSLAV BUSINESS—*Some 46 U.S. firms were represented at the first annual U.S.-Yugoslav Economic Council meeting in Belgrade last May.*

Tanzania Expects Gradual Recovery, Shops For Agri-Business Equipment

During the past two years Tanzania has been experiencing a severe economic crisis due to drought, worldwide inflation and stagnant productivity. The economy is expected to show gradual improvement during 1976, but the debilitating after-effects of the crisis are likely to delay a full and sustained recovery at least until the end of the year.

The U.S. Embassy in Dar es Salaam adds that present opportunities for direct U.S. investment appear limited because of the East African country's economic philosophy and financial constraints, but there are good prospects for U.S. sales of aid-financed equipment and machinery needed to expand agricultural production and processing.

Tanzania has embarked on its own path of economic and social development. Its guideposts include socialism, self-reliance, egalitarianism, state control of production and distribution, and cooperative rural living and farming. The state controls virtually all commerce and industry through a network of holding companies, production agencies, agricultural commodity authorities and financial institutions. Imports and wholesale trade are handled by the state-owned Board of Internal Trade.

Agriculture is crucial area

Crucial to the economic recovery are self-sufficiency in food and increased production of cash crop exports. By government accounts, the June-September 1975 food crop harvest was a normal one, capable of feeding the country though not sufficient to rebuild reserves. Thus, Tanzania should be able to lessen its trade imbalance and conserve scarce foreign exchange.

Throughout 1976 Tanzania's balance of payment and foreign reserve positions are likely to continue to be strained, with corollary restriction on imports and domestic consumption. Tax revenues in FY76 are expected to increase only marginally due to the depressed economy, and with inflationary pressures already strong the government is attempting to hold down its spending. The OPEC decision to increase oil prices by 10 percent will add $10 million to Tanzania's import bill, and it will have to rely even more heavily on foreign aid donors for development expenditures. The FY76 budget calls for expenditures of $904 million, 8 percent over last fiscal year. Foreign assistance is expected to finance 55 percent of the $367 million capital budget. The government has indicated its intention to place a greater portion of investment in directly productive activities, such as agriculture, and to insure more efficient utilization of public resources.

With completion in late 1975 of the major construction projects for road and rail links with Zambia and additional deep-water berths in the port of Dar es Salaam, Tanzania's transport infrastructure and capability to move Zambian goods is greatly improved. The highway, built by the United States and other western donors, and the railway, constructed by the Chinese, will also open up new areas of the country for agri-business and exploitation of modest coal and iron deposits. Some of these areas will be served by the 200-megawatt Kidatu hydroelectric complex (100 megawatts already in operation) to be completed by 1980. Foreign oil companies continue their search for petroleum along the coast, but so far with little success. To the extent its finances and foreign assistance allow, Tanzania in 1976 will continue to expand agri-related and light industries aimed at import substitution and further utilization of domestic raw materials. It is hoped that labor productivity and the efficiency of state-owned companies will show improvement.

Although Tanzania needs and to some extent desires the capital, technology and managerial skills that American business can offer, it is only mildly attractive to investors. Tanzania's socialist framework and concern to prevent domination by foreign business and finance, limit and define the role for potential U.S. investment. Tanzania tends to rely on concessionary foreign donor assistance rather than private firms for its capital development. Investment at this time is further inhibited by the country's difficult financial position. International banks exercise caution. Tanzania's shortage of foreign exchange can mean suspension of dividend remittances, and long delays in compensation in cases where foreign enterprises are nationalized.

U.S. "book value" investment in Tanzania is currently about $12 million, or 13 percent of total foreign investment. Roughly $9 million of the U.S. figure represents petroleum marketing. General Tire has a relatively large investment in a tire factory. Its relationship with its majority partner, the Tanzanian Government, and with its workers has been very good and the firm is planning to expand production to meet further the needs of the East African market. In 1975 an American oil firm obtained a large concession for petroleum exploration.

A major new opportunity for U.S. investment and management contracts developed early last year, partly as a result of Tanzania's shortfalls in food production. A state-owned corporation invited U.S. agri-business firms to study and to invest in establishing large modern farms which would produce rice, soybeans and other food crops for the domestic market. These agri-business ventures would be in southern Tanzania, newly accessible with completion of the highway and railway to Zambia. Some interested American firms have submitted contracts for feasibility studies with the goal of designing and managing the farms. Due to the complex Tanzanian decision-making process and the foreign exchange pinch, there has been little real progress to date on the formation of such joint ventures. Other opportunities for investment involve plans for additional import-substituting light industries, such as a proposed pulp and paper mill.

Untied aid funds are available

Although forced to restrict imports for financial reasons, Tanzania still offers good prospects for American suppliers of agri-related equipment and machinery. The country continues to receive large amounts of aid, much of which is untied and therefore available for financing under international tenders. The types of equipment Tanzania needs are those in which U.S. suppliers are highly competitive.

Best prospects for U.S. sales include: earthmoving and leveling equipment, trucks and other heavy-duty vehicles, dairy equipment, materials handling equipment, irrigation-related products, textile and paper machinery, and general construction equipment.

Tanzania plans to expand rural water supply and irrigation systems. It is also in the process of constructing a new capital city in Dodoma.

The Livestock Development Authority, with financing from the IBRD and other donors, has issued tenders for equipment necessary for meat and dairy production and distribution.

In addition, Tanzania will continue to look to the United States for supplies of chemicals including pharmaceuticals, tractors and other agricultural machinery, and telecommunications equipment. A solvent Zanzibar also offers opportunities to U.S. suppliers of agricultural, processing and related equipment.

Serious potential suppliers should watch for international tenders and should visit the market. Early delivery and good follow-up servicing are important for sales. A useful guide in English for importing and exporting, including relevant government regulations, is available for a charge from the government-owned National Bank of Commerce. Although somewhat depressed at present, the Tanzanian market of 15 million holds potential for expanded United States exports.

Rwanda Is Slowly Developing Base For Improvement

As one of the least developed of the developing countries, Rwanda suffers from the ills commonly associated with economies based primarily on subsistence agriculture: a burgeoning population (the highest population density in Africa), insufficient budgeting receipts, limited commodity exports and heavy reliance on foreign assistance. The central African nation is additionally handicapped by its landlocked dependence on the occasionally disrupted routes to the ports of Mombasa and Dar es Salaam, adds the U.S. Embassy in Kigali.

Nevertheless, the return of political stability following formation of the Second Republic, the implementation of a foreign policy which has improved former tense relations with immediate neighbors, the imposition of governmental discipline and rapidly increasing foreign assistance (particularly in infrastructure) are providing a base for moderate economic improvement.

Specific sectors of the economy—particularly commodity exports and foreign assistance projects—are receiving considerable investment capital. For other areas—notably energy imports, inflation, consumer goods and agricultural production—the future poses major problems. Higher petroleum and transport costs have been responsible for a significant deterioration in the balance of payments and a growing debt servicing schedule is expected to exert even greater pressure on external finances.

In spite of the precarious developmental position, American investors and traders can find attractive business opportunities in Rwanda if they are willing to be improvisational and persistent. Traditional commercial tools of market surveys, consumer profiles, etc., are generally not available and Rwandan unfamiliarity with many U.S. business practices requires a patient approach.

Rwanda is particularly interested in private investment. The Foreign Investment Code, under revision, is liberal, and both government and consumers are favorably disposed toward Westerners. In November, Rwanda became a member of the International Finance Corporation, with membership providing investor services in the private sector including project identification. Areas of possible interest include foreign assistance projects such as road building.

The growing tourism industry could also be attractive to U.S. firms. However, Rwanda's isolation, limited paved road network and lack of many amenities expected by today's traveler counsel installations on a modest scale.

A U.S. firm has expressed interest in plans for a tin smelter. In the event UNDP feasibility studies are favorable, U.S. investment in the mineral sector may be possible.

American export sales opportunities continue to center on used clothing, and prospects for continued mid-term growth are good. In the longer term, Rwanda's embryonic textile industry will displace a portion of these sales. The United States continues to be Rwanda's largest customer, taking 63 percent of exports in 1973 and probably similar amounts in 1974 and 1975 through coffee, tea and pyrethrum purchases. There is no reason to assume in the near future any major shift in the market share.

American firms providing technical services such as project management contracts (particularly in the agricultural sector which is receiving major bilateral and multilateral attention) have opportunities. Other potential services include air shipment of key exports and imports in order to bypass difficult overland conditions.

Commercial Arbitrators Set 6th Inter-American Session

The Sixth Inter-American Commercial Arbitration Conference will be held April 4-6 in Rio de Janeiro. The Brazilian Arbitration Center is organizing and hosting this conference under the auspices of the Inter-American Commercial Arbitration Commission.

An increase in the judicial acceptance and enforcement of international arbitration agreements and awards, the efficacy of arbitration agreements in contracts licensing or transferring technology, the arbitration of disputes between private entities and quasi-governmental corporations, together with a study of the new Organization of American States Commercial Arbitration Convention will be among highlights of the conference.

Write Charles R. Norberg, General Counsel, Inter-American Commercial Arbitration Commission, Room 1819, 310 Federal Bar Bldg. West, Washington, D.C. 20006, or Professor Azeredo Santos, President, Brazilian Arbitration Center, Rua 1 de Marco No. 13, Rio de Janeiro, Brazil.

Calendar For World Traders

March 17-19—New Orleans—31st Mississippi Valley World Trade Conference, Fairmont Hotel. Theme: Bicentennial—Two Hundred Years of World Trade. Speakers include Julian M. Carroll, Governor of Kentucky, which will be featured as "honored state". Organized by Mississippi Valley World Trade Council, 504-525-7201.

March 24—Newark, N.J.—New Jersey District Export Council seminar. Robert Wilson of the Bureau of International Commerce will discuss marketing to the EEC.

March 24—New York—Int'l Executives Assn. luncheon meeting, Summit Hotel. Theme: What Next in the Middle East?

March 24-26—Houston—Second Annual Houston World Trade Conference, World Trade Center (713-225-0968). Theme: Trade Opportunities 1976: The Road to Recovery.

March 30-April 1—Grand Rapids, Mich.—Seminar on Export Development Opportunities. Sponsors: Michigan District Export Council, Commerce Detroit District Office.

April 1—Memphis—Mid-South Exporter's Roundtable dinner meeting, Monte's Restaurant.

April 1-2—New York—Legal and Financial Aspects of Doing Business in Selected Foreign Countries, World Trade Institute.

April 4-7—Atlanta—Int'l Gift Fair, Merchandise Mart. For information, Don Killoren, Market Manager, 240 Peachtree St., Atlanta 30303 (404-688-8994).

April 5-6—New York—Seminar on Selling in the Arab World, American Management Associations. Followed by meetings on How to Cut Red Tape in Egypt, April 7; Saudi Arabia, April 8; and Iran Update, April 9.

April 5-6—Ann Arbor—Seminar on Selling in South Africa, University of Michigan's Graduate School of Business Administration. For information, 313-763-1387.

April 6—New York—FCIB Roundtable Conference on Int'l Finance, Credit, Collection and Exchange Problems luncheon meeting, Summit Hotel.

April 7—New York—Export Finance and Insurance seminar, Essex House. Sponsors: U.S. and New York Chambers of Commerce.

April 8 — Springfield, Mo. — Greater Ozarks Int'l Trade Club dinner meeting, King's Table Cafeteria. Presentation by Japan External Trade Organization (JETRO) on The Midwest's Stake in U.S./Japan Trade.

April 10—Cleveland—Discussion of Present Status and Future of Ohio World Trade Center, John Carroll Univ.

April 13—New York—59th Int'l Trade Conference of the Int'l Executives Assn., Waldorf Astoria. Theme: Int'l Trade Realities—Today & Tomorrow.

Worldwide Business Opportunities

International trade specialists in the Department of Commerce and Foreign Service Officers in the U.S. Embassies and Consulates around the world are continually developing specific commercial opportunities through which American companies can find buyers, agents, partners or investors abroad. One of the major means for communicating these opportunities promptly and accurately to the U.S. business community is through the columns of this magazine.

The section that follows presents details about licensing and joint venture proposals, opportunities to sell to foreign enterprises and appoint agents, and details on major construction and expansion projects.

Licensing, Investment Abroad

0100, 0200 — SAUDI ARABIA — Firm seeks U.S. joint venture partner for **agricultural development** of one sq. km. of land in Gassim agricultural area north of Riyadh. Land will be developed using modern techniques to produce barley, wheat, vegetables and fodder grains. Cattle raising is also possibility. U.S. joint venture partner would contribute equipment and management. Percent ownership in investment is negotiable. Overseas Products & Investment Opportunities Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-76148. OPIC.

1422 — COSTA RICA — Owner of **lime company** seeks U.S. partner to expand production. Currently sells about 8,000 tons of lime per year for agricultural and construction usage. Partner would be expected to take 30 to 40 percent equity and contribute perhaps $200,000 plus machinery and equipment over 3 years. Owner is civil engineer and has operated construction company for 25 years. Ing. Mario E. Sancho, President, Carbocal S.A., Industria de Carbonato de Calcio, Aptdo. 2978, San Jose. P-76137. OPIC.

2034 — ECUADOR — Joint venture is sought to produce **dehydrated mashed potatoes.** Product will be made from locally grown potatoes which are plentiful and inexpensive. No similar production in Ecuador. Firm, currently producing fruit concentrates, established 1973; sales in 1975, $360,000. Ing. Fernando Jativa, Manager, Codin Cia Ltda., P.O. Box 573, Quito. P-76138. OPIC.

2387—SWITZERLAND—Firm seeks U.S. **belt manufacturer** to enter joint venture arrangement. U.S. firm would contribute approximately $200,000. Swiss factory would pass orders for about 300,000 belts annually over five-year period. Roland Andre Hirsch, 11 Rue Michel Chauvet, 1208 Geneva. P-76139.

2452, 3272, 3448—VENEZUELA—Ministry of Public Works in Caracas has invited Venezuelan firms to submit offers for **construction of prefabricated elementary and secondary schools.** Buildings are to be of variable design, adaptable to any type of terrain and one to six stories high. Modules must incorporate structure, finish and utilities. This project may offer opportunity for U.S. systems builders to arrange joint venture or conclude licensing agreement with Venezuelan firm seeking building technology. U.S. Embassy does not believe importation of school buildings will be allowed. Ministeiro De Obras Publicas, Direccion General De Desarrollo Urbanistico, Direccion de Estudios y Proyectos de Edificios, Division De Proyectos Educacionales, Edificio Banven, Piso 8, Avenida Lecuna, Miranda a Reducto, Caracas. P-76158. OPIC.

2650—FRANCE—Manufacturer of **polyester and cardboard packaging** for agricultural products and ammunition seeks licenses. Is interested in producing related packaging materials. Established in 1953, firm employs 90. Good reputation. Jacques Chaduc, president and general manager, L'Emballage Moderne, La Varie, 44150 Ancenis. Telephone: 40/83.11.02. P-76140.

2819—AUSTRIA—Austrian firm of Grill & Grossmann is interested in negotiating purchase of U.S. license for production of **zinc chloride.** Firm is acting on behalf of Eastern European client. Grill & Grossmann, which enjoys longstanding relations in Eastern European markets, are manufacturers of equipment for the chemical industry. Interested U.S. firms should communicate directly with Grill & Grossman, A-1010 Vienna, Weihburggasse 9. Telex, 01/3501; telephone, 529485 or 522240. P-76150.

3261—FRANCE—Seeks licensing agreement for manufacture of **prefabricated pipes and plumbing equipment for buildings, prefabricated bathrooms.** Firm is also interested in importing these products for its own use. It is very large construction and public works company with several plants in France. Employs 3,100; annual sales, $300 million. Mr. Larquet, engineer, Societe Generale d'Entreprises S.A., 21 rue du Pont des Halles, 94150 Chevilly Larue. P-76152.

3325—CANADA—Representative of Canadian province is seeking investors interested in establishing medium-sized **steel jobbing foundry** in the province. Market research feasibility study results are available and attractive financing and incentive awards are offered. Interested only in investors who have experience in operating foundries and who are prepared to set up and operate foundry using their own technology and expertise. Write: Robertson, Nikerson, Group Associates Ltd., consulting engineers, 56 Sparks St., Ottawa, Ontario K1P 5A9. P-76156.

3362—MEXICO—Large modern foundry is interested in contacting prospective U.S. suppliers of foundry technology. Company is interested in receiving technical, pricing and other information from prospective suppliers of **metals alloying and processing technology.** It is particularly interested in obtaining process which makes possible an alloy combining iron and nickle with chromium, an alloy more resistant to abrasion when used in grinding mills. Ing. Roberto Garza Salinas, associate manager, Fundicion BAF, S.A., Aptdo. Postal 1915, Monterrey, N.L. Telephone: Monterrey 51-15-00. WTDR. P-76157.

3540 — UNITED KINGDOM — Leading manufacturer of **high quality mold tools for plastics industry** seeks licenses or joint ventures to make related products. Firm also designs and produces high-quality press tools and special purpose machines, jigs and fixtures. Is member of industrial group with annual sales of $4.5 million. Has well established sales outlets in U.K. and Europe; supplies large British original equipment manufacturers. Bowman Scott, Director, Plasmec Ltd., Weydon Lane, Farnham, Surrey GU9 8QL, England. P-76154.

3540 — UNITED KINGDOM — Designer and manufacturer of **plastic and rubber molds, pressure dies, jigs, press tools, fixtures and specialized molding aids** seeks licenses to produce similar items. Also

Important Notice

Most member countries of the League of Arab States employ a secondary boycott against foreign firms which undertake certain specific types of business relationships with the State of Israel. The Commerce Department will not disseminate or make available for inspection any tenders or trade opportunity documents which contain conditions intended to support such boycotts, or which are based on documents known to contain such provisions. Trade or investment opportunities published herein are not presently known to be subject to such conditions. However, it is possible that U.S. firms responding to opportunities from Arab countries may be asked at some stage of a transaction to participate in an Arab boycott-related restrictive trade practice as defined in the Department's Export Administration Regulations (15 CFR, Part 369 et. seq.).

Firms are reminded that pursuant to Section 3(5) of the Export Administration Act of 1969, as amended, it is the policy of the United States (a) to oppose restrictive trade practices or boycotts fostered or imposed by foreign countries against other countries friendly to the United States, and (b) to encourage and request U.S. concerns engaged in the export of articles, materials, supplies, or information to refuse to take any action, including the furnishing of information or the signing of agreements, which has the effect of furthering or supporting such restrictive trade practices or boycotts. Accordingly, U.S. concerns receiving such requests to participate in a restrictive trade practice or boycott are encouraged and requested to refuse to comply with them.

Firms are further reminded that U.S. concerns receiving requests to participate in a restrictive trade practice or boycott must report such request to the Department of Commerce in accordance with Section 369.4 of the above-cited regulations.

interested in making and marketing patented plastic products where it has ability to provide necessary tooling. Employs 60, is affiliated with industrial group. H. R. Plater, Managing Director, Malone Precision Tool Co., Ltd., Industrial Estate, Colchester Road, Witham, Essex CM8 3BJ, England. P-76160.

3551—FRANCE—Seeks joint venture for **cross marketing of complementary lines of winery equipment.** French firm manufactures very large cylindrical wine presses. Employs 485, reports annual sales of $17.3 million. Good reputation. J. M. Amieux, exports sales manager, Constructions Meca-Metalliques Chalonnaises (C.M.M.C.), 49290 Chalonnes sur Loire. Cable, COMACAISE; telex, 72964; telephone, 41-00-56. P-76141.

3551—FRANCE—U.S. manufacturer of **popcorn, potato chip dispensers and related equipment** used by concessionaires is sought to join in new marketing venture. Partners would include French distributor of ice cream processing and packaging equipment and another American firm, producing beverage and carbonation equipment. Family-owned French concern was established in 1902. Mr. Coenca, Coenca SARL, 20 rue Henri-Martin, 92100 Boulogne-Billancourt. Cable, COENCA BOULOGNE; telephone, 609-0580. P-76142.

3612—BRAZIL—Manufacturer of **mercury and fluorescent lamp ballasts** seeks joint venture. Wants to expand and diversify product line. Also supplies about 20 percent of domestic demand for fluorescent lamp holders. Firm's production and storage facilities valued at about $1 million. Employs over 200, including sales force of 29 which operates throughout Brazil. Nearly 30,000 sq. meters of land are available to build new plant in neighboring Itu. Marino Frate, director of marketing, INDELPA S.A. Industrial Eletrica Paulista, Rua Piratininga 722, 04730 Sao Paulo,SP. WTDR. P-76143. OPIC.

3643—UNITED KINGDOM—Group of firms specializing in manufacture of **precious metal contacts, high quality precision and pressed metal products, semi-automatic production equipment and gold and silver plating seeks licenses.** Is interested in making any products complementary to its present line and skills. Employs 300, reports annual sales of $4.5 million. Group has well established sales outlets in U.K. and Europe. It supplies large British original equipment manufacturers and major nationalized industries including Post Office. Bowman Scott, director, Plasmec Ltd., Weydon Lane, Farnham, Surey GU9 8QL, England. P-76147.

3662—UNITED KINGDOM—Producer of **weapon training systems and precision engineering products** seeks licenses. Is interested in manufacture of products and equipment compatible with its present line. Firm is part of RFD Group Ltd., which employs 1,600 and has annual sales of $23.2 million. P. I. Prophet, managing director, RFD Systems Engineering Ltd., 77 Catteshall Lane, Goldalming, Surrey GU7 1LH, England. P-76149.

3699—UNITED KINGDOM—License to make related products is sought by manufacturer of **components stamped or machined from electrical insulating materials.** Also engaged in **high quality vacuum forming, medium volume assembly and testing of light electromechanical devices.** Firm is member of group with $4.5 million in annual sales. Has good marketing outlets in U.S. and Europe. Also supplies large British original equipment manufacturers. Bowman Scott, Director, Plasmec Ltd., Weydon Lane, Farnham, Surrey GU9 8QL, England. P-76159.

3873, 3674 — SWITZERLAND — Seeks licensing arrangement for manufacture of U.S. **MOS or 12L integrated circuits for electronic watches, or complete LED or LCD watch modules.** Firm also seeks to purchase ICs or complete electronic watch modules directly from U.S. manufacturers in large quantities. It will consider joint venture for production and/or distribution of electronic watches and **miniature consumer electronic products** in West Europe. Swiss company was established in 1875. For 100 years, has specialized in exports of quality jeweled watches and more recently in cheaper, pin-lever watches. In early 70s firm has engaged in R&D on electronic watches. On basis of MOS integrated circuits and other components obtained from U.S., has developed LED and LCD electronic watches, including a solar powered model featuring small calculator. It sells these latest products through department and chain stores in Western Europe mostly under private labels. Through subcontractors, firm claims production capacity of 1,000 to 5,000 pieces of solid-state watches per week. R. A. Hirsch, president, Driva Watch Factory, 11 rue Michel Chauvet, 1208 Geneva. P-76144.

3949—NEW ZEALAND—Seeks licensing arrangement for manufacture of **above ground swimming pools** based on flexible sheeting. Desires technical assistance for "D.I.Y. system of swimming pools and filtration." U.S. company should indicate amount of royalty involved. N. M. Allcock, General Manager, Dunlop New Zealand Ltd., P.O. Box 19549, Christchurch. P-76145.

3953, 2753—FRANCE — Seeks licensing agreement for manufacture of **self-inking stamps and chemically engraved plates.** Firm specializes in manufacture of rubber stamps in industrial and chemical printing and in photo-engraving and phototype-setting. Francois Boscher, president and general manager, Boscher Gravure, 3 rue des Compagnons, B.P. 12, 44800 St-Herblain. P-76153.

Licensing and investment proposals from foreign firms are listed in these columns. Specific product interests in each proposal are highlighted in bold type to facilitate identification and each proposal is preceded by the appropriate four-digit product number taken from the Standard Industrial Classification (SIC) Manual.

Background information on opportunities abroad and assistance on overseas investments are available from the Overseas Products and Investment Opportunities Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. "P" numbers should be used when responding to any of the specific proposals listed.

WTDR indicates that a World Traders Data Report containing financial and background information on the foreign firm is available for $15 from the Export Information Division, Room 1313, U.S. Department of Commerce, Washington, D.C. 20230, or from any Commerce District Office.

OPIC indicates that the country involved is eligible for investment insurance coverage and financing from the Overseas Private Investment Corporation. Information regarding applicable coverage may be obtained from OPIC, Washington, D.C. 20527.

Licensing In U.S.

For additional information on these opportunities to manufacture foreign firms' products in the United States under a licensing agreement or in partnership, write the Domestic Investment Services Staff, Bureau of International Commerce, Room 4020, U.S. Department of Commerce, Washington, D.C. 20230 (202-967-2248), referring to the appropriate file number.

AUSTRIA—U.S. licensees are sought for newly designed posture balanced **school bags** made by Austrian manufacturer. File 2935

BELGIUM—Firm engaged in design and construction of buildings for private use seeks U.S. licensee for steel frames for outside load bearing partitions for buildings, prefab villas, offices, motels, and garages. File 2936

FRANCE—Firm of good repute offers for licensing patented special package used to preserve fruits and vegetables. File 2937

GERMANY — Electrical engineer seeks licensing arranagment with U.S. firm to utilize his new procedure for **bundling without turbulences of electrons by magnetic fields in nuclear fusion reactors.** File 2938

GERMANY—Small German firm offers for production under license in U.S. its system for **recycling of paper mill sludge** offering various products to be manufactured out of reclaimed raw material such as fire retardant pressboard. File 2939

GERMANY — Firm seeks licensing or joint venture agreement with U.S. firm to make their **prefab house parts, precast concrete parts, compound concrete building blocks and precast concrete stairs.** File 2940

GERMANY—Old, well established German firm seeks joint venture with American firm to establish a **hog bristle processing plant** in U.S. File 2941

NETHERLANDS — "Oil spill" oil and water separator to be used in offshore drilling platforms, on-shore refineries and onboard tankers is offered for licensing in U.S. by a leading Dutch engineering contractor. The product is patented. File 2942

SWEDEN — Financially sound and expanding Swedish firm seeks U.S. firm to manufacture under license and market their various kinds of Swedish **whey butter and whey cheese.** Whey butter sandwich spread reportedly contains very little fat but does contain iron and vitamins. File 2943

SWITZERLAND—Well established company of attractively designed **blinds, awnings,** and related items, seeks contact with potential U.S. licensees to manufacture their products in U.S. File 2944

SWITZERLAND — Novel, patented **ice-cube-making machine** is offered for manufacture under license in U.S. Reportedly, most novel feature is that the ice cubes

do not stick together as happens in conventional ice-cube-making machines. File 2945

SWITZERLAND—Trade consulting firm offers following for licensing in U.S.: a) small fountain pen sized **mosquito repelling device** that emits sound waves—device has been researched by reputable research institutions; b) **electrical "Swiss gong"** to be used in place of door bell; c) **"jet shower"** to increase massage effect while reducing water normally utilized. File 2946

SWITZERLAND — Well regarded Swiss manufacturer in field of structural metal offers licensing arrangement for its new, patented, combined **paneling/air-conditioning system.** System was developed to enhance sound and thermal insulating properties of walls. File 2947

SWITZERLAND—Licensees are sought for **pneumatic roadsweeping machines** that feature nearly dust-free operation, low maintenance, and rugged construction. These machines have successfully replaced many conventional mechanical roadsweepers in Switzerland. File 2809-R

Korean Construction Firm Seeks U.S. Ties In Overseas Projects

A recent report from the U.S. Embassy in Seoul describes the increasing activity by Korean construction companies in overseas projects. Major expansion is planned through 1980 with a target of $10 billion in new construction contracts by that year. There has been great development in the Middle East, and Africa and Latin America are promising areas for expansion. Korean firms are particularly interested in forming joint ventures with experienced U.S. construction companies with access to financial resources. American suppliers of architectural and engineering services and manufacturers of heavy construction and mining equipment should also find a potential market for their products as the Korean overseas construction program continues to expand. For further details write Overseas Construction Development Bureau, Construction Association of Korea, 31-23 1-Ga, Taepyong-Ro, Jung-gu, Seoul, Korea. P-76151. OPIC.

France Offers Opportunities For Industrial Investment

France offers new opportunities for companies looking for a site to set up industrial facilities, a research center, financial offices or management headquarters. A project will be especially welcome if it creates new facilities for production, research or management; is accompanied by substantial new investment; offers a meaningful number of jobs in areas of labor surpluses; introduces technology; and offers potential for exports, thus creating revenues that strengthen the French balance of trade.

The French Government agency specifically in charge of informing foreign investors—for example, where to locate a new plant and how to go about doing so—is DATAR. This agency has recently produced two brochures covering France's new investment climate. For the brochures and additional information, write: French Industrial Development Agency, 610 Fifth Ave., New York, N.Y. 10020; phone, 212-757-9340.

Afghanistan Invites Inquiries For Oil, Gas Exploration

The U.S. Embassy in Kabul reports that the Government of Afghanistan invites inquiries from U.S. firms interested in exploring for oil and gas in Afghanistan, including exploitation contracts. Areas designated for exploration are primarily in the southwest region, where there are reportedly good geological indicators; but they could extend to other sections of the country, including Herat.

Afghanistan currently has no petroleum law, although one is in draft form. Any agreement, therefore, would result from direct negotiations between the interested company and the Government of Afghanistan. Such an agreement may require considerable patience and will involve extensive face-to-face contact.

To follow up this opportunity, send a statement of interest and outline of company's qualifications to Afghan Petroleum Exploration Company, Ministry of Mines and Industries, Kabul, Afghanistan. P-76136. OPIC.

Foreign Trade Inquiries

These trade opportunities are based on reports received from the U.S. Foreign Service—Department of State by the Trade Opportunities Division, Room 2323, U.S. Department of Commerce, Washington, D.C. 20230. The commodities in which foreign firms have interest are indicated by the five-digit numbers and commodity classifications which are from the Standard Industrial Classification (SIC) Manual and the Numerical List of Manufactured Products, 1972 Census of Manufactures.

U.S. firms should be aware that the listing in Commerce America *of opportunities to trade in specific commodities and technical data does not necessarily imply approval of their export by the Department of Commerce pursuant to the Export Administration Act of 1969. Applicable export licensing regulations must be followed.*

Every effort is made to include only traders with good reputations. However, the Department cannot be responsible for any trade relations.

WTDR indicates that a World Traders Data Report on this specific firm is available at $15 from the Export Information Division, Room 1313, U.S. Department of Commerce, Washington, D.C. 20230. A WTDR is a trade profile which contains commercial information including financial references, on an individual foreign firm. Orders must include complete name and address of the subject firm and be accompanied by payment. Further information concerning WTDRs and request forms are available at each Commerce District Office.

The mark (•) indicates that this trade opportunity is a request for bids by a foreign government agency.

Direct Sales

Forestry services

08500—HONDURAS — Government presents invitation to prequalify and register for (1) feasibility studies for forestry industries; evaluation and planning studies for industrial/forestry penetration roads, (2) design and construction of forestry penetration roads, and (3) construction of structures and installation of machinery for forestry industries. Financed by IMF. Applications and additional information available from: Gerencia de Industrias, Corporacion Hondurena de Desarollo Forestal (Cohdefor), 9 Piso, Edificio Midence Soto, Apartado Postal 1378, Tegucigalpa. Consultants urged to prequalify ASAP.

Bituminous coal, lignite mining

1211XXX—GERMANY—Coking coal; one million metric tons/yr. for five-year period. Specifications: Size—P to 20, 50% less than 3 mm; ash—up to 8%; sulphur —up to 1%; swelling index—minimum 7; moisture—up to 8%; volatile parts—26 to 29%. Coal must come from one mine only. Offers requested f.o.b. U.S. east coast port. Payment by irrevocable let. credit. Firm understands that size in which coal requested is not common in U.S. It believes however, that, in view of volume of contract to be awarded (about $175 million), a U.S. coal mine may make special effort to meet size requirements. Firm well reputed local shipping co. Plans to add freight insurance to f.o.b. price & then offer coal to the Egyptian powerplant via firm's subsidiary in Alexandria, Egypt. Reply to—Mr. Hans J. Aust, Mgr., Ernestra European Near East Shipping & Travel Co. GmBH., Martinistrasse 58, 2800 Bremen. Telex 0244186; tel 0421/3160257.

Building construction

15100—GERMANY—Fruit and vegetable refrigeration facilities. West Berlin firm specializing in trade with East European countries has received request for construction of several refrigerated warehouses to store large quantities of processed fruits and vegetables. Project plans are firm and specific bids should be received by SOFACO directly. Bid letting agency is SOFACO AG & Co. GmbH, Kurfuerstendamm 214, D-1000 Berlin 15; Telex: 1 85 685 SOFCO D; Telephone: (030) 883 10 05.

Chemical products

• **28990—COSTA RICA**—Water treating chemicals for use in Arenal project as follows: 60 metric tons calcium chloride, 25 metric tons accelerating water re-

ducing agent, 60 metric tons retarding densifier agent, and 50 metric tons air entraining agent. All of these compounds, except calcium chloride, must be in liquid form, and meet ASTM-494.71 specifications. Four-month participation guarantee of 30,000 colones (approx. U.S. $3,500) and two-month performance guarantee of 10 percent of value of offer are required, and several penalties for non-compliance and non-performance are specified. Copies of specifications may be obtained from and bids should be submitted to Hugo Castro B., Jefe Proveeduria Institute Costarricense de Electricidad (ICE), Apartado 10032, San Jose. Bid deadline April 23. Tender number 3004. Payment by L/C or 30-day sight draft.

Shoes

3149410—ALGERIA—Tender for Lot 1, supply of 50,000 pairs football shoes; Lot 2, 30,000 pairs "training" shoes; Lot 3, 7,000 pairs basketball shoes. Offer must be f.o.b. and c.i.f., include free sample, offer for each lot required. Correspondence and offer in French. All specifications metric. Reply to Societe Nationale "Les Nouvelles Galeries Algeriennes" 67, Rue Larbi Tebessi, B.P. 150, Alger R.P. Belcourt, Algiers. Cables: SNGA Alger. Telex: 52776. Phones: 65-07-68 and 66-23-65.

Leather goods

● **3199031 — IRAQ** — Tender for 1,000 saddles for officers and 1,000 saddles for soldiers. Tenderers must include sample. Reply to Brigadier Arfan Latif, Director, Directorate of Contracts and Purchases, Ministry of Defense, Baghdad. Cable address: DIFAH BAGHDAEU.

Rolling, drawing, & extruding of nonferrous metals

● **33500—MALAYSIA**—Supply of telephone cables and loading coils for period 1976-1980. Bid deadline April 14. Director-General of Telecommunications, Telecommunications Department, Jalan Bukit Mahkamah, Kuala Lumpur. Tender documents available at above address at M$100 (U.S.$40) per set.

Farm machinery

35230—NIGERIA—The Nigerian Agricultural Bank Ltd., 18/19 Abmadu Bello Way, P.M.B. 2155, Kaduna, is requesting brochures and price lists on following types of equipment: water pumps, water tanks, livestock feedmills, livestock feeds, poultry equipment, electric generating plants, land clearing equipment, vehicles, tractors and accessories, typewriters, weighing scales, rice-hullers and accessories, sprayers, maize shellers, chain saws, fishing and shrimping trawlers, decorticators, day-old chicks, breeding stock (cows, bulls, pigs), insecticides, and chemicals. Orders are placed as and when approved projects require the particular items. Final buying decision is made primarily by the farmer, depending on his project and budget.

General industrial machinery

35600—ISRAEL—Industrial Planning & Engineering Co.—LIFE Ltd. (I.P.E.C.—LIFE) is seeking purchasing agent in U.S. who will be responsible for soliciting quotations from U.S. suppliers, negotiate as required, and follow up on execution of orders placed in U.S. Company plans to commence purchasing program for future projects around June. Forwarding and inspection services and financing from purchasing agent are not required. I.P.E.C.—LIFE plans to purchase equipment amounting to approximately $2 million, divided into approximately 50 purchase orders. Additionally, small purchases amounting to $100-$200 each will be required. Interested parties should contact: Mr. A. D. Minitzer, Purchasing Department, Industrial Planning & Engineering—LIFE Ltd., P.O. Box 1031, Haifa, Israel.

Office, computing, accounting machines

● **35700 — BRAZIL** — Empresa Brasileira De Correios E Telegrafos, Departamento De Servicos Gerais, Avenida W/5 Sul—Quadra 712/912, Conjunto Pasteur—Bloco 3—3rd Floor, Brasilia, D.F., has issued tender No. ECT/AUT/01/76 for supply of integrated system for processing correspondence by means of optical digit readout (OCR-System). Automatic system for sorting mail pouches and parcels by means of centralized command. Bid deadline April 15. Bid instructions and specifications may be purchased at above address for $1,100 per set.

Important Notice

Most member countries of the League of Arab States employ a secondary boycott against foreign firms which undertake certain specific types of business relationships with the State of Israel. The Commerce Department will not disseminate or make available for inspection any tenders or trade opportunity documents which contain conditions intended to support such boycotts, or which are based on documents known to contain such provisions. Trade or investment opportunities published herein are not presently known to be subject to such conditions. However, it is possible that U.S. firms responding to opportunities from Arab countries may be asked at some stage of a transaction to participate in an Arab boycott-related restrictive trade practice as defined in the Department's Export Administration Regulations (15 CFR, Part 369 et. seq.).

Firms are reminded that pursuant to Section 3(5) of the Export Administration Act of 1969, as amended, it is the policy of the United States (a) to oppose restrictive trade practices or boycotts fostered or imposed by foreign countries against other countries friendly to the United States, and (b) to encourage and request U.S. concerns engaged in the export of articles, materials, supplies, or information to refuse to take any action, including the furnishing of information or the signing of agreements, which has the effect of furthering or supporting such restrictive trade practices or boycotts. Accordingly, U.S. concerns receiving such requests to participate in a restrictive trade practice or boycott are encouraged and requested to refuse to comply with them.

Firms are further reminded that U.S. concerns receiving requests to participate in a restrictive trade practice or boycott must report such receipt to the Department of Commerce in accordance with Section 369.4 of the above-cited regulations.

Communications equipment

● **36620—INDIA**—Asst. Director General (Imports), Room No. 514, P&T Directorate, New Delhi, has issued tender No. 12-131/75-MMD for supply of testing instruments for microwave/VHF sections of telecommunications Research Centre, consisting of standard modulator and demodulator, signal generator, viscosity meters, etc. Bid deadline May 10. Copy of specifications available from above address for $2.74, or on short-term loan basis to firms located in U.S. from Science & Electronics Div., Room 1006, U.S. Department of Commerce, Washington, D.C. 20230, 202-967-5569.

● **36620—INDIA**—Ministry of Communications (P & T Board), New Delhi-110 001, India has issued tender No. 12-134/75-MMD for supply of testing instruments for data digital/electronics laboratories. Bid deadline May 7. Copy of specifications available from above address for $2.74, or on short-term loan basis to firms located in U.S. from Science & Electronics Div., Room 1006, U.S. Department of Commerce, Washington, D.C. 20230, 202-967-5569.

Measuring & controlling devices

● **38210—INDIA**—Bharat Heavy Electricals Ltd., High Pressure Boiler Plant, Tiruchirapalli 620014, has issued three tenders: No. S. 334/41 for supply of three mobile air pollution monitoring systems for evaluation of grain size distribution of dust and powder samples from thermal power stations, metallurgical and process industries, bid deadline May 7; No. S. 333/41 for pressure and flow measuring instruments, bid deadline May 7; and No. S. 332/41 for vibration and noise analysis equipment, including pre-amplifier and microphone set, microphone assembly, vibration analyzer, audio meter calibration set, instrument tape recorder, frequency analyzer, vibration transducers, bid deadline May 6. Copies of specifications available on short-term loan basis to firms located in U.S. from Science & Electronics Div., Room 1006, U.S. Dept. of Commerce, Washington, D.C. 20230, 202-967-5569.

Photographic equipment, supplies

●**38610 — IRAQ** — Brigadier Arfan Latif, Director, Directorate of Contracts and Purchases, Ministry of Defense, Baghdad, has issued tender No. ORD/45/76 for 50 complete sets of 35 mm. portable projectors and 100 projectors (16 mm.) and accessories. Bid deadline April 3. Copy of specifications available on short-term loan basis to firms located in U.S. from Science & Electronics Div., Room 1006, U.S. Dept. of Commerce, Washington, D.C. 20230, 202-967-5569.

● **38610—INDIA**—Bharat Heavy Electricals Ltd., High Pressure Boiler Plant, Tiruchirapalli 620014, India, has issued tender No. S 330/41 for supply of one high-speed portable hand camera to be supplied with necessary accessories like wide angle projector and with electronic flash attachment. Bid deadline May 5. Copy of specifications available on short-term loan basis to firms located in U.S. from Science & Electronics Division, Room 1006, U.S. Department of Commerce, Washington, D.C. 20230, 202-967-5569.

Scrap & waste materials

50930XX—SPAIN—Scrap metals (iron, copper & tin scrap). Reply ASAP to—Mr. J. Ramirez Compoy, Mgr., Transcon-

tinental Eximport, S.L., Micer Masco, 34-B, Valencia (10). Telex 64156 Cojr; Tel 96/369-4603.

Business services

7392XX—COSTA RICA—Government social security institution is seeking contract services to provide technical assistance in administration and finance. Project financed by Inter-American Development Bank. Interested companies should file form bid 91-A, which may be obtained by writing Office for Professional Service Firms, Inter-American Development Bank, 808 17th St., NW., Washington, D.C. 20577.

Representations

Foreign private firms are interested in agency agreements and/or distributorships for these products.

Converted paper, paperboard products

2649598—ITALY—Special paper for book binding. Agent of all types of tanned leather. Has 2 employees & enjoys good reputation. Reply to—Giancarlo Luzzatto, Via Monte Rosa 36, 20149 Milan. Cable Olraite Milan; Tel. 02/468076.

Abrasive, asbestos, nonmetallic mineral products

3229237 — GERMANY — Lamp chimneys, crimp top chimneys ⅞" to fit Star Eagle burners. Estab. 1940; 40 employees. Turnover approx. DM 8 million. Reply to—Herr Groepper, Robert Alke & Co., Deichstrasse 29, 2000 Hamburg 11. Tel: 040 36 20 47.

Special industrial machinery

3559539 — KOREA — Microwave tobacco equip. for use in popping stems of tobacco leaves to facilitate making tobacco powder for processing into tobacco products; 18 units. Govt. office of monopoly has 18 tobacco plants in Korea & now considering installation 1 unit at each. Reply ASAP to—C. T. Park, Dai Il Trading Corp. Ltd., C.P.O. Box 1270, Seoul 100. Cable Chonamkak, Seoul; tel 23-4284.

Communications equipment

3662631—UNITED KINGDOM—Communication recorders for avionic, defense & security operations. Estab. 1950; U.K. operation for Assmann GmBH of W. Germany, which employs 600. Mfrs. & exports communications recorders, automatic announcers, telephone speaking clocks & air traffic ATIS/Volmet systems. U.K. operation seeks contact with U.S. firms with view broadening Assmann range. Reply ASAP to—John Godbmlt, Mgr., Assmann GmBH Audio Telecommunications, Sandbrook Nash House, 41 Earl St., Maidstone, Kent. Tel 0622-56681. Ref: Dresdner Bank AG, Bad Homburg, W. Germany.

366266X — SWITZERLAND — Laser, pulse, DC & other amplifiers. Reputable, active distributor of electronic components, instruments & accessories. Newly-established. Employs 4. Experienced in selling to OEM's R & D organizations, laboratories in Switzerland. Claims servicing capability. Negotiating repr. of Minco Products, Minneapolis, Minn. Bank ref: Bank Leu, 8134 Adliswil-Zurich. Business recommended. Usual credit guarantees. Reply to—Mr. T. Voemel, Pres., Alpha-Beta Electronics, P.O. Box 88, 8060 Zurich. Tel 01/713 18 20; telex 58 225.

Instruments for measurement, analysis and control

382536X—AUSTRALIA — Oscillographic equip. WTDR 2/76. Reply to—Mr. R. Henderson, Mgr., Bio-Cybernetic Systems, 62 Cross St., Double Bay NSW 2028. Cable Bionetic.

Scrap materials

50930XX—ITALY—Steel, iron & non-ferrous metal scrap. Importer, agent & exporter of minerals, chemical products, coal, metals, ferro-alloys & scrap. Has 15 employees & invoiced sales about $330,000. Enjoys good reputation. Reply to—Charles Haim, Mng. Dir., C.O.C. Italia SPA, Via Nerino 2, 20123 Milan. Cable: COMINCO Milan; tel 02/861241.

50930XX — ITALY — Non-ferrous metal scrap (copper, zinc, lead, aluminum, tin, nickel). Importer, agent, distributor and exporter of ferrous and non-ferrous scrap metals. Has two employees and enjoys good reputation. Reply to—Fernando Duranti, Mgr., Schiavone Metalli Europa, S.P.A., Via Boscovich 48, 20124 Milan. Cable: Mischiavo Milan; tel. 02/2046608.

50930XX — KOREA — Waste paper for drinking purpose, old tab cards (IBM cards), approx. 90 pct. manila, 10 colored. Quantity: 500/MT of shipment. Annual requirements: 2,000 to 3,000 M/T. Est. value: $500,000 to $750,000. Shipment: prompt after order received. Payment: by irrevocable L/C payable after 180 days from B/L date at interest of New York prime rate plus acceptance charge (within 2 percent per annum) in favor of supplier in U.S. (USANCE). Firm, registered import offer agent, claims that it has located market for immediate supply of above item. Firm also interested in becoming sales agent for U.S. supplier on exclusive basis. Firm's annual business volume $500,000. Estab. 1971, has five employees. Reply to—Mr. J. T. Kim, Pres., Union Chemical Corp., K.P.O. Box 339, Seoul 110. Cable: Goldenrich; tel: 22-9259.

50930XX—SPAIN—Scrap metal. Operates large agency in SE. Spain. Imports on commission basis & acts merely as agent, not importing for own account. Fin. ref: Banco Espanol de Credito, Banco de Bilbao, Banco de Vizcaya & Banco Central at respective Alicante br. offices. Reply ASAP to—Mr. Francisco Bevia Berenguer, Owner, Belando 5, Alicante. Cable: AVIBE; Tel 965/212-773.

Bulgaria Seeks Contact With Materials Handling Industry

The Bulgarian Chamber of Commerce, which represents the majority of industrial organizations in Bulgaria, has expressed interest in receiving brochures and catalogs from U.S. manufacturers of materials handling and heavy hauling equipment. Itself a leader in the production of such equipment, the Bulgarian materials handling industry might be an attractive partner in joint production or cooperation arrangements. Items of particular interest are: electric fork-lift trucks, for use in warehouses and able to lift up to 12-meters in height; electric industrial trucks; and off-highway platform haulers with loading capacities of up to 60 metric tons. Materials should be sent directly to the Bulgarian Chamber of Commerce and Industry, 11a Stamboliiski Blvd., Sofia.

Fair For U.S. Goods In Kuwait

U.S. exporters of a wide range of products are invited to participate in a trade fair in Kuwait, Nov. 20-26. The Kuwaiti trading firm of Al-Sabah & Sabawi Co. W.L.L., sponsor of American Expo-Kuwait 76, describes it as the first all American trade fair held in Kuwait. For information write Overseas Financial and Investment Services, Inc., P.O. Box 36, Athens, O. 45701. Enrollment deadline is May 1.

Future Construction Abroad

SAUDI ARABIA — Raymond International, U.S. firm, is not constructing port phase of U.S. Corps of Engineers project in Saudia Arabia as was indicated in Commerce America, March 1, page 39. Raymond International is instead performing surface and sub-surface exploration and topographic work at proposed cargo port at Ras Al Mishub as a subcontract to consulting contract between COE and the URS Corp., San Mateo, Calif. Construction is still open, and a performance type of **design/construction contract for the port** is expected to be offered in near future.

UNITED ARAB EMIRATES — Abu Dhabi Department of Public Works preparing to publish announcement of its intention to invite tenders for construction of a **large civil airport.** Project will be constructed in four phases: I. Terminal building; II. Major earthworks, runways, taxiways and aprons; III. Other buildings: cargo terminal, catering building, workshops, etc.; IV. Major mechanical/electrical equipment: air-conditioning, power substation, control systems, etc. Total cost estimated to be $250 million, making it one of the largest yet undertaken in Abu Dhabi. Expected project timing; Phase I—Terminal: tender documents available by mid-March; closing for tender submission mid-June; let contract August. Phase II—Runways, etc.: tender documents available August; closing for tender submission near end 1976; let contract early 1977. Phase III—Other buildings: documents expected to be ready mid-1977; construction begin in about two years. Phase IV—Mech/Elec: timing not certain—may go ahead of or after Phase III. May also be combined with Phase III contract. Airport expected in service in spring or summer 1980. Contracting firms will not prequalify in usual sense. No list of prequalified firms will be prepared in advance, but tender documents will be sold only to firms with suitable previous experience. U.S. firms which would like to purchase tender documents should make capabilities and experience known to Abu Dhabi Depart-

ment of Public Works, P.O. Box 3, Abu Dhabi, United Arab Emirates, Attention: Ted Willis. Brief description of project will be available from Department of Public Works.

INDONESIA — Tenders are invited by P. T. Barata Metalworks in connection with its **new foundry center** (initial output 5,000 tons) in Gresik, East Java. Project includes: A) construction of complete power system, based on 70 KV public grid, and consisting of 70 KV switchyard, 6 KV switchgear, and .4 KV switchgear, with all necessary equipment, such as transformer, breakers, cubicles, feeders, etc.; B) emergency power system, comprising 250 KV emergency diesel generator set with all auxiliaries and ancillary equipment; and C) closed cooling water system (approx. 180 tons/hour)—includes essentially cooling tower, water pumps, pipings and accessories, as well as water treatment system. Foreign exchange costs financed from aid by West Germany. Bid documents can be purchased at US$241 from Irawan Rudyana, Project Officer, P. T. Barata Metalworks & Engineering Proyek Foundry Center Surabaya, Jalan Ngagel 109, Surabaya, Indonesia; and Barata, Jakarta Representative Office, Jalan Kebonsirih 48, Flat 14, Jakarta. Bid bond not required. Bids (one original and two copies) should be hand-carried to Irawan Rudyana, address above. Simultaneously two other copies should be sent to Fichtner Consulting Engineers, Grazer Strasse 22, 7 Stuttgart 30, West Germany.

THAILAND—Government is planning a $40.9 million **project to increase production of fresh fish** for domestic consumption and improve the economic status of low-income fishermen. Project aimed at exploitation of fish resources off coast of Thailand, improvement of onshore facilities for distribution of catch. Asian Development Bank management proposing 20 million baht loan to finance foreign exchange cost of replacement/modernization of Thai fishing fleet and onshore facilities. Project has two components. Part A: calls for modernization of Thai fishing fleet by providing 583 boats to be locally constructed and equipped with imported marine diesel engines, generators, navigational, chilling and deck equipment, radiophones and consulting services. Part B: calls for modernization and construction of five cold storage and ice-making facilities, 32 refrigerated trucks, radiophones and consulting services. U.S. suppliers should write directly to: Part A—Mr. Sant Bandhukul, Dir., Fish Marketing Organization, New Rd., Bangkok; Part B—Mr. Sanan Ruamluks, Dir., Government Cold Storage Organization, New Rd., Bangkok. OPIC.

ECUADOR—Montufar Hydroelectric and Irrigation Project involves hydroelectric generation of 150,000 KW and irrigation of 3,600 hectares, in northeastern part of Ecuador. Estimated cost $15.3 million. Inter-American Development Bank has lent $4.1 million and Government of Ecuador has provided $1.9 million. Outside financing will be sought for rest of cost. Potential trade opportunities are: electricity generating, switching and transmission equipment. Project under control of Instituto Ecuatoriano de Electrificacion (INECEL), Avenida 10 de Agosto 1820, Quito.

ARGENTINA—Government has not yet signed approval of contract authorizing the firm Alcalis de la Patagonis to build Argentina's first **sodium carbonate plant.**

The Overseas Private Investment Corp. (OPIC) offers political risk insurance to U.S. construction firms planning to submit bids on projects in certain developing countries, identified by the "OPIC" notation at the end of some items. For further information on OPIC's construction insurance program, write Information Officer, Overseas Private Investment Corp., Washington, D.C. 20527. Tel: 202-632-1854.

Proposed plant will use Solvay process, with Pittsburgh Plate Glass (U.S.) know-how. Will be erected near San Antonio Oeste, Province of Rio Negro, S. Argentina. Plans call for investment of about $40 million of which approx. $22 million will be allocated for purchase of foreign equipment. Installed capacity will be 200,000 metric tons a year, design capacity 310,000 metric tons. Overall construction time will demand three years after approval. Production scheme will be: dense soda, 132,000 MT/Y; light soda, 51,000 MT/Y; sodium bi-carbonate, 12,000 MT/Y, and sodium sesquicarbonate, 10,000 MT/Y. Ferrostaal A.G. is turn-key contractor, and imported equipment is already in procurement stage. Equipment yet to be purchased includes: two 3,000 CV steam turbines, boilers, pumps, compressors and calcination ovens. This equipment will be purchased 30 days after government signs final contract with Alcalis de la Patagonis, which will occur by June. Interested suppliers should contact E. Roth, Project Manager, Ferrostaal A.G., Huyssenallee 22, Essen, FRG. Financing terms will be critical in decision as to source of supply.

GERMANY—Engineering and construction firms in Frankfurt area seek cooperation with U.S. firms and suppliers for sales to Middle East. Specific examples where U.S. machinery and equipment and know-how could be incorporated into these German or German/U.S. projects are: Well-established U.S. products with strong service and spare parts capabilities; capability to integrate with German standards; cooperation with German contractors engaged in major projects administered by U.S. Corps of Engineers; cooperation with U.S. engineering consultants working with German firms; other forms of joint U.S.-German project cooperation; functional areas and product lines in which U.S. firms have experience and existing market penetration in Middle East. Major German engineering/construction firms in Frankfurt area including those with offices in U.S. are: Lurgi Gesellschaften GmbH, 6 Frankfurt/Main, Gervinusstrasse 17-19 (American Lurgi Corp., 5 E. 42nd St., New York, N.Y. 10017); Philip Holzmann A.G., 6 Frankfurt/Main 2, Postfach 119089, Taunusanlage 1; Hochtief AG fuer Hoch—und Tiefbauten, 6 Frankfurt/Main 1, Bockenheimer Landstrasse 24, (American & Foreign Enterprises Inc., Rockefeller Center, 630 5th Ave., New York, N.Y. 10020).

THAILAND—Director, Forest Industry Organization, State Enterprise, announced a small **veneer plant** will be built in Pattani, southern Thailand, during middle of this year. With budget of about $1.8 million, plant will consist of two log peeling machines, capable of peeling 60 to 80 cubic meters per day; drying machine and impregnator. Planned that project will expand in fourth or fifth year to include small but complete plywood plant, which will increase capital investment to approx. $15 million. U.S. exporters of veneer plant equipment write Amnuay Kohvanich, Dir., The Forest Industry Organization, c/o Ministry of Agriculture and Cooperatives, Rajdamnern Ave., Bangkok. OPIC.

MADAGASCAR—Major pulp mill project at Moramanga (250,000 tons), to which government was giving intensive consideration in spring of 1975, has been deferred for now in favor of separate, smaller **pulp mill** (80,000 tons) projected near town of Fianarantsoa, S. Madagascar. Government has asked UNIDO to send several experts to review the Fianarantsoa project and recommend foreign firms capable of undertaking job. Depending on recommendations of UNIDO experts, scheduled to visit in April, government will probably make decision on one of the pulp mill alternatives in the second quarter 1976, then invite offers or bids from manufacturers or suppliers of paper pulp mills. U.S. firms capable of undertaking either the 80,000-ton or 250,000-ton pulp mills under consideration should communicate with Director of Industry and Mines, Malagasy Ministry of Commerce and Industry, Tananarive. OPIC.

Visiting Buyers and Officials

PAKISTAN—Rafiq A. Ghauri, Proprietor, Links International, 6 Link McLoed Rd., Lahore; cable: Links, Lahore; telephone: 58585; telex: Care 942 or 944, Lahore, will be visiting U.S. to **purchase non-ferrous scrap,** specifically aluminum scrap code tall, talon and taint and brass scrap code honey. Potential sales $200,000. Can be reached during U.S. stay at Supreme Stainless Steel Co., Inc., 135 Marcus Blvd., Hauppauge, N.Y. 11787, c/o Mino Abikzir, V.P. For further information contact Paulette Wolfson, U.S. Department of Commerce, Rm. 2322, Washington, D.C. 20230, 202-967-3265.

AUSTRALIA—Sydney businessman Albert C. Russell will visit U.S. March 20 to late April to contact U.S. suppliers of **micro-computer controlled railroad signaling and communicating equipment.** Immediate application is for mining companies. Represents Engineering Div. of Swift & Co., Ltd. Contact Joe Panza, Powers Regulators Co., 3400 Oakton St., Skokie, Ill. 60076, or Paulette Wolfson, Commerce, address above.

UNITED KINGDOM—I. Katz, Walmar House, 296 Regent St., London, WI, will visit New York March 23-30. Interested in representing U.S. manufacturers of **children's outerwear** (up to 10 years) and **ladies' blouses,** and meeting with established **textile mills seeking U.K. agent for apparel fabrics.** I. Katz, c/o J. Preston Corp., 71 Fifth Ave., New York, N.Y. Additional information available from Paulette Wolfson, Commerce.

AUSTRALIA—Raymond Lumley, Mng. Dir., Clay Target Shooting Products Pty., Ltd., P.O. Box 97, Wahroongh, NSW 2076, plans arrive New York first week April, then travel in U.S. **Wants to buy fully automated machinery for making clay targets, and learn latest technology.** Contact Paulette Wolfson, Commerce.

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Atlanta, 30309, Suite 600, 1365 Peachtree St., N.E. (404) 526-6000.

Baltimore, 21202, 415 U.S. Customhouse, Gay and Lombard Sts. (301) 962-3560.

Birmingham, Ala., 35205, Suite 200-201. 908 S. 20th St. (205) 254-1331.

Boston, 02116, 10th Floor, 441 Stuart St. (617) 223-2312.

Buffalo, N.Y., 14202, Room 1312, Federal Bldg., 111 W. Huron St. (716) 842-3208.

Charleston, W.Va., 25301, 3000 New Federal Office Bldg., 500 Quarrier St. (304) 343-6181, Ext. 375.

Cheyenne, Wyo., 82001, 6022 O'Mahoney Federal Center, 2120 Capitol Ave. (307) 778-2151.

Chicago, 60603, Room 1406, Mid-Continental Plaza Bldg., 55 E. Monroe St. (312) 353-4450.

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Columbia, S.C., 29204, Forest Center, 2611 Forest Dr. (803) 765-5345.

Dallas, 75242, Room 7A5, 1100 Commerce St. (214) 749-1515.

Denver, 80202, Room 161, New Custom House, 19th and Stout Sts. (303) 837-3246.

Des Moines, Iowa, 50309, 609 Federal Bldg., 210 Walnut St. (515) 284-4222.

Detroit, 48226, 445 Federal Bldg., 231 W. Lafayette (313) 226-3650.

Greensboro, N.C. 27402, 203 Federal Bldg., W. Market St., P.O. Box 1950. (919) 275-9111, Ext. 345.

Hartford, Conn., 06103, Room 610-B, Federal Office Bldg., 450 Main St. (203) 244-3530.

Honolulu, 96813, 286 Alexander Young Bldg., 1015 Bishop St. (808) 546-8694.

Houston, 77002, 1017 Old Federal Bldg., 201 Fannin St. (713) 226-4231.

Indianapolis, 46204, 357 U.S. Courthouse & Federal Office Bldg., 46 E. Ohio St. (317) 269-6214.

Los Angeles, 90024, 11201 Federal Bldg., 11000 Wilshire Blvd. (213) 824-7591.

Memphis, 38103, Room 710, 147 Jefferson Ave., (901) 534-3213.

Miami, 33130, Rm. 821, City National Bank Bldg., 25 W. Flagler St. (305) 350-5267.

Milwaukee, 53202, 605 Federal Office Bldg., 517 E. Wisconsin Ave. (414) 224-3473.

Minneapolis, 55401, 218 Federal Bldg., 110 S. Fourth St. (612) 725-2133.

New Orleans, 70130, Room 432, International Trade Mart, 2 Canal St. (504) 589-6546.

New York, 10007, 37th Floor, Federal Office Bldg., 26 Federal Plaza, Foley Sq. (212) 264-0634.

Newark, N.J., 07102, Gateway Bldg. (4th floor) Market St. & Penn Plaza (201) 645-6214.

Omaha, Neb., 68102, 1815 Capitol Ave., Suite 703A (402) 221-3665.

Philadelphia, 19106, 9448 Federal Bldg., 600 Arch St. (215) 597-2850.

Phoenix, Ariz., 85004, 508 Greater Arizona Savings Bldg., 112 N. Central Ave. (602) 261-3285.

Pittsburgh, 15222, 2002 Federal Bldg., 1000 Liberty Ave. (412) 644-2850.

Portland, Ore., 97205, 501 Pittock Block, 921 S.W. Washington St. (503) 221-3001.

Reno, Nev., 89502, 2028 Federal Bldg. 300 Booth St. (702) 784-5203.

Richmond, Va., 23240, 8010 Federal Bldg., 400 N. 8th St. (804) 782-2246.

St. Louis, 63105, 120 S. Central Ave. (314) 425-3302.

Salt Lake City, 84138, 1203 Federal Bldg., 125 S. State St. (801) 524-5116.

San Francisco, 94102, Federal Bldg., Box 36013, 450 Golden Gate Ave., (415) 556-5860.

San Juan, P.R., 00902, Room 100, Post Office Bldg. (809) 723-4640.

Savannah, 31402, 235 U.S. Courthouse and Post Office Bldg., 125-29 Bull St. (912) 232-4321, Ext. 204.

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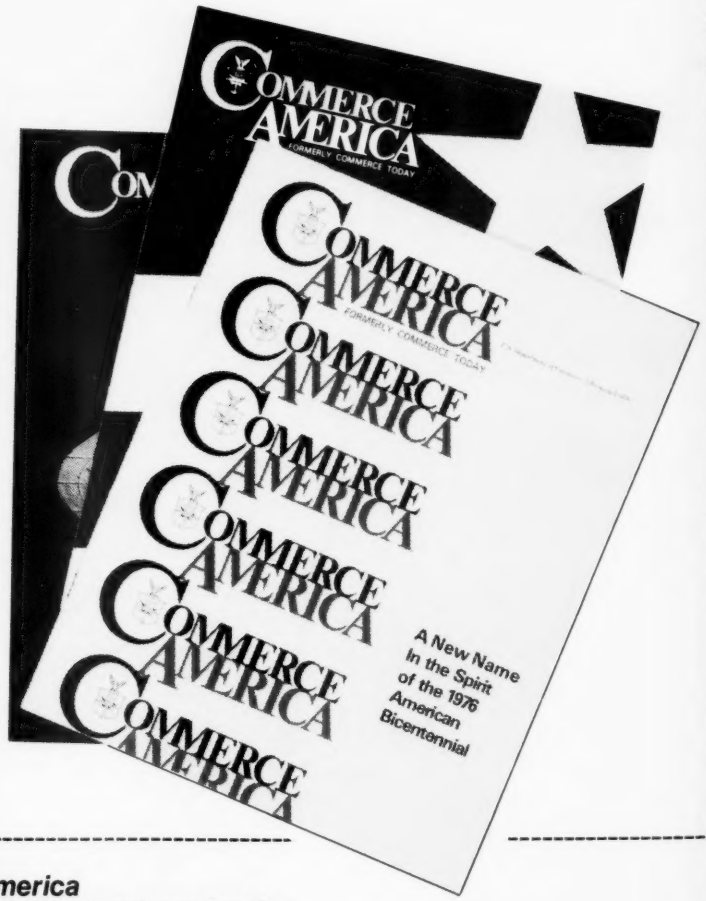

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